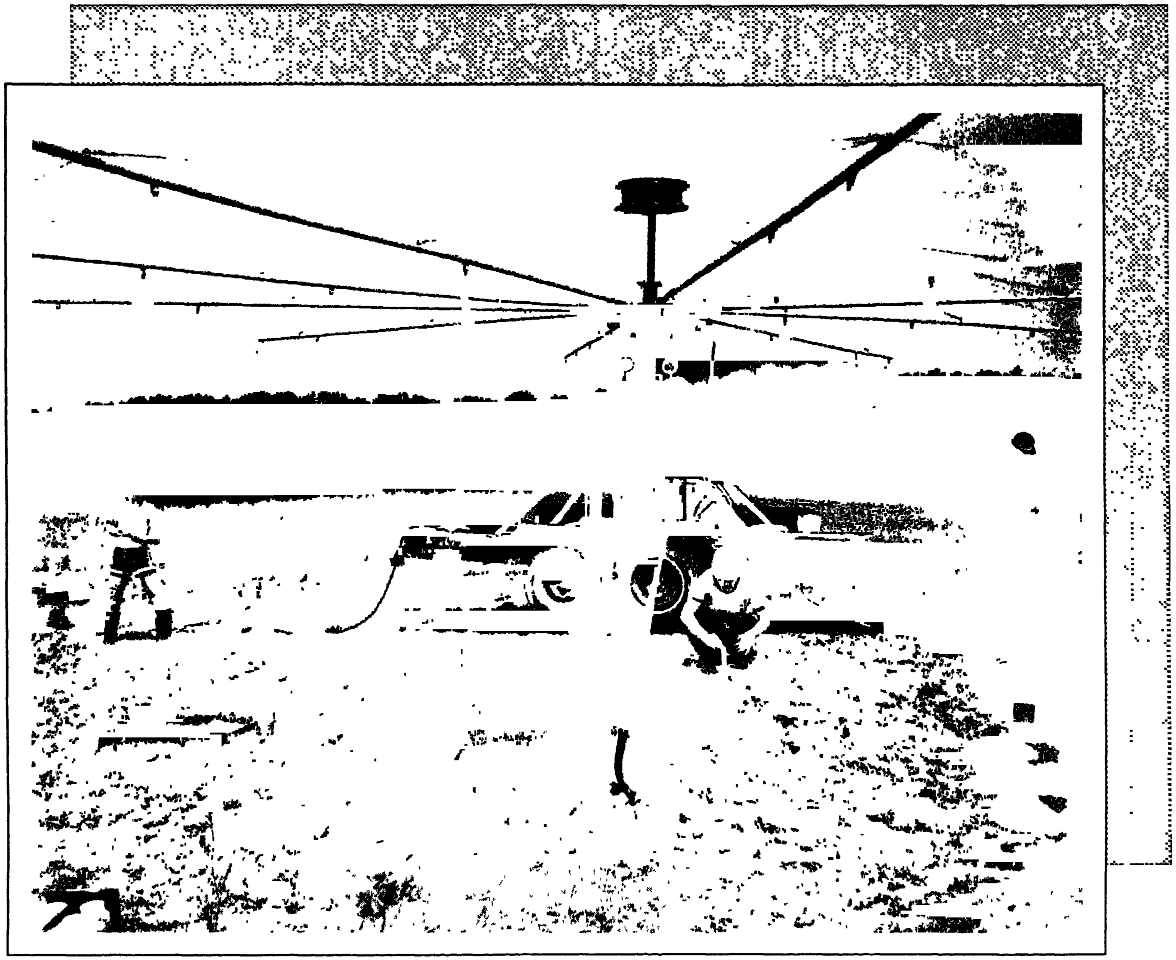
A Compendium of Soil Erodibility Data From WEPP Cropland Soil Field Erodibility Experiments 1987 & 8



William J. Elliot
Assistant Professor
Department of Agricultural Engineering
The Ohio State University
Columbus, Ohio

Ann M. Liebenow
Research Associate
Department of Agricultural Engineering
The Ohio State University
Columbus, Ohio

John M. Laflen
Research Leader
National Soil Erosion Research Lab
USDA ARS
Purdue University
West Lafayette, Indiana

Kris D. Kohl
Soil & Water Engineering Specialist
Storm Lake Office
Iowa State University
Storm Lake, Iowa

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INTRODUCTION

The United States Department of Agriculture (USDA) Agricultural Research Service (ARS) is developing a new erosion prediction technology to replace the Universal Soil Loss Equation (USLE) as the primary means of predicting soil erosion by the Soil Conservation Service (SCS) and other agencies, including the Bureau of Land Management, and the Forest Service (Foster, 1987).

A set of equations to define erosion processes has recently been developed (Meyer and Wischmeier, 1969; Foster and Meyer, 1972a; Foster et al., 1976; Foster, 1987). These equations have generally given more consistent estimates of water erosion, and allow the estimation of erosion on an individual storm basis. They separate water erosion into rill and interrill components, and then combine the results to calculate total erosion on a storm-by-storm basis over the entire growing season. This modeling approach allows application to a greater diversity of climates, as well as improved consideration of topography, seasonal changes in crop growth, soil moisture, and residue cover.

The USDA has decided to adopt the rill/interrill erosion prediction technology in the form of a user-friendly computer program to replace the USLE. The ARS was given the responsibility for developing this computer technology, in a project known as the Water Erosion Prediction Project (WEPP) (Foster, 1987). Existing methods for determining the susceptibility of soil to rill and interrill erosion were not adequate for the WEPP model (Foster et al., 1976; Wischmeier, 1976), so in 1985, the ARS began planning a field research project to measure the on-site erodibility of soils.

The objectives of this compendium are to:

1) Describe the methods used to measure soil erodibility and soil properties in the field.
2) Report the erodibility and property values that were calculated.

EROSION EQUATIONS

INTERRILL EROSION

Upland erosion can be divided into two major components, rill and interrill (Lane et al., 1987). Interrill erosion is due to detachment and transport by raindrop impact and overland flow. Interrill erosion has been shown to be approximately proportional to the square of the rainfall intensity (Foster et al., 1976; Watson and Laflen, 1986; Meyer and Harmon, 1984). In the WEPP simulation model (Lane et al., 1987), interrill detachment is modeled as:

$$D_i = K_i I^2 \qquad \{1\}$$

where: D_i = Interrill detachment rate, kg m^{-2} s^{-1}
K_i = Interrill erodibility constant, kg s m^{-4}
I = Rainfall intensity, m s^{-1}

In addition to rainfall intensity, interrill erosion is related to slope. In a laboratory study, Singer and Blackard (1982) compared the erosion rate for two different slopes. Watson and Laflen (1986) presented data from an experiment designed to quantify the effect of rainfall intensity and plot slope on interrill erosion of field plots.

Lattanzi et al. (1974) compared interrill erosion for different slope and mulch rates. Foster et al. (1976) presented a conceptual model showing that at lower slopes, interrill transport limited erosion, and that at higher slopes, raindrop detachment limited interrill erosion. A study of the literature relating interrill detachment to slope (Lattanzi et al., 1974; Meyer and Harmon, 1987; Singer and Blackard, 1982; Watson and Laflen, 1986) combined with data collected as part of this experiment (Liebenow, 1989), led to an interrill detachment equation in the form:

$$D_i = K_i I^2 S_f \qquad \{2\}$$

where S_f is a slope factor reflecting the limitation of overland flow transport at low slopes. A stable expression for S_f which accounted for the variation due to slope in the above data sets was:

$$S_f = 1.05 - 0.85 \exp^{(-4 \sin(s))} \qquad \{3\}$$

where s = slope angle. The above expression for S_f is 0.20 for a flat slope, and 1.00 for a slope of 45 degrees. The maximum value is 1.05 for a slope of 90 degrees.

RILL EROSION

The DuBoys channel scour equation as developed by sedimentation engineers (Vanoni, 1975) has been modified for rill erosion (Meyer, 1964). In the WEPP model (Lane et al., 1987) rill detachment is expressed as:

$$D_c = K_r (\tau - \tau_c) \qquad \{4\}$$

where: D_c = Detachment capacity of clear water, kg m^{-2} s^{-1}
K_r = Rill erodibility of soil due to hydraulic shear, s m^{-1}
τ_c = Shear below which there is no detachment, Pa
τ = Hydraulic shear of flowing water, Pa
$= \gamma r_h s \qquad \{5\}$

where: γ = Density of water, N m^{-3}
r_h = Hydraulic radius, m
s = Hydraulic gradient
≈ Slope of the rill bottom

Both research (Graf, 1971) and field observations (Foster and Meyer, 1972b) have shown that the rate of sediment detachment is reduced as the concentration of sediment being carried by a channel increases. This effect was observed immediately downstream from major reservoirs, where relatively clear water caused accelerated erosion on the channel floor. The same phenomenon was also observed by the authors during erosion research in 1987 and 1988, when it was noted that more severe scouring occurred at the top of rills immediately below the point of adding clean water than further downrill. At some highly erodible sites, deposition was observed at the downstream end of some of the rill plots. Because of the effect of sediment load on rill erosion, the rill detachment subroutine in the WEPP model includes algorithms to account for a decrease in detachment due to increased amounts of sediment load. Hence, it was necessary to examine the effect of sediment load on the rill erosion rates observed during this experiment.

According to Foster and Meyer (1972b), an intuitive expression for the effect of suspended sediment on rill detachment by scour is:

$$\frac{D_r(x)}{D_c(x)} + \frac{Q_s(x)}{T_c(x)} = 1 \qquad \{6\}$$

where:
$D_r(x)$ = Rill detachment rate at position x, kg m^{-2} s^{-1}
$D_c(x)$ = Rill detachment capacity for clean water at x, kg m^{-2} s^{-1}
$Q_s(x)$ = Sediment load at x, kg m^{-1} s^{-1}
$T_c(x)$ = Maximum transport capacity of rill flow at x, kg m^{-1} s^{-1}

The rill detachment rate (D_r), is the change in sediment load $\left(\frac{dQ_s(x)}{dx}\right)$. Replacing D_r with $\frac{dQ_s(x)}{dx}$ in equation {6}, and solving for $\frac{dQ_s(x)}{dx}$, leads to the following differential equation:

$$\frac{dQ_s(x)}{dx} = D_c(x)\left(1 - \frac{Q_s(x)}{T_c(x)}\right) \qquad \{7\}$$

The above expression allows for the increase of sediment load due to rill detachment only. If the interrill contribution per unit length and width of rill (E), is added to the rill sediment load, then the following equation can be used to relate the change in rill load to sediment load, sediment transport capacity, and interrill sediment contribution:

$$\frac{dQ_s(x)}{dx} = D_c(x)\left(1 - \frac{Q_s(x)}{T_c(x)}\right) + E \qquad \{8\}$$

Equation {8} cannot be solved directly, but an approximate solution (Elliot, 1988) which included dividing increases in sediment load between interrill and rill sources, and assumed a constant shear along a rill, was:

$$D_c = -\frac{T_c}{w_r L}\ln\left(1 - \left(\frac{Q_s}{w_r T_c}\right)\left(\frac{D_c'}{D_c' + E}\right)\right) \qquad \{9\}$$

where:
L = Rill plot length, m
w_r = Rill plot channel width, m
D_c'= Detachment capacity for a given flow calculated by equation {4}
T_c = Transport capacity along a rill plot
Q_s = Sediment delivery rate from a rill plot

METHODS AND PROCEDURES

SOIL SELECTION

Soils from all areas of the US were considered, and those having a wide range of textural, geomorphic, and chemical properties were selected (Figure 1). Slopes were in the range of four to six percent. Priority was given to soils which were of a dominant type, or of agricultural importance for a given region, and also to those soils known to be highly erodible (Alberts et al., 1987). A summary of the soil series and locations is given on page B2. Figure 2 shows the position of each of the soils studied on a textural triangle. The number associated with each soil represents the order in which it was studied.

Both Figures 1 and 2 include three soils which were eroded in 1986, identified by letters. Discussion of the results from these three soils can be found in Brenneman (1988) and Elliot et al. (1989a).

Prior to measuring the erodibility, each site was surveyed by the SCS (USDA SCS, 1984), and some of the results from the analysis are summarized on pages B274 and B275. The analysis was similar to that carried out for a standard soil survey and included a profile analysis of a central pit, and additional analyses of several more shallow pits near the corners of a 50 meter square plot site.

Water for each experiment was obtained locally from wells, municipal water supplies, irrigation canals, or nearby ponds or reservoirs. Where necessary, local cooperators or contractors hauled water to the site. Two portable 50 m^3 steel-framed pvc folding water tanks held the water until it was pumped to the simulator. The temperature of the eroding water was noted, and a sample was collected for quality analysis.

SITE PREPARATION

During the season prior to the erosion study, the site crop was corn, wheat, some other row crop, or fallow. Excess surface residue was removed, and the sites were deep-tilled and lightly disked three to twelve months prior to erosion studies (Laflen et al., 1987).

Upon arrival, the direction of the rills was determined by orienting the rills to give a desired slope of three to six percent. On slopes greater than six percent, or on soils believed to be highly erodible, slopes were decreased by offsetting the direction of the rills from the main slope direction. In 1987, slopes of the rills were determined by photogrammetric analysis for each individual rill. In 1988, the elevations of the top and bottom of each nine meter long rill plot were measured with a level to calculate individual rill slopes.

A ridging tool mounted on a small tractor formed six rill plots, as well as ridging areas where interrill plots would be installed. Rill plots, each nine meters long, spaced at 460 mm were established with a metal sheet across the top of each plot. Metal collectors and pvc collector pipes to carry the outflow to collecting pits were installed at the downstream end of the rills (Figures 3 and 4).

Some ridges were flattened to construct 500 mm wide and 750 mm long infiltration plots with a slope similar to the natural hill slope. Interrill erosion plots, 500 mm wide and 750 mm long, with sides sloping approximately 50 percent toward a central collecting trough were installed (Figure 4).

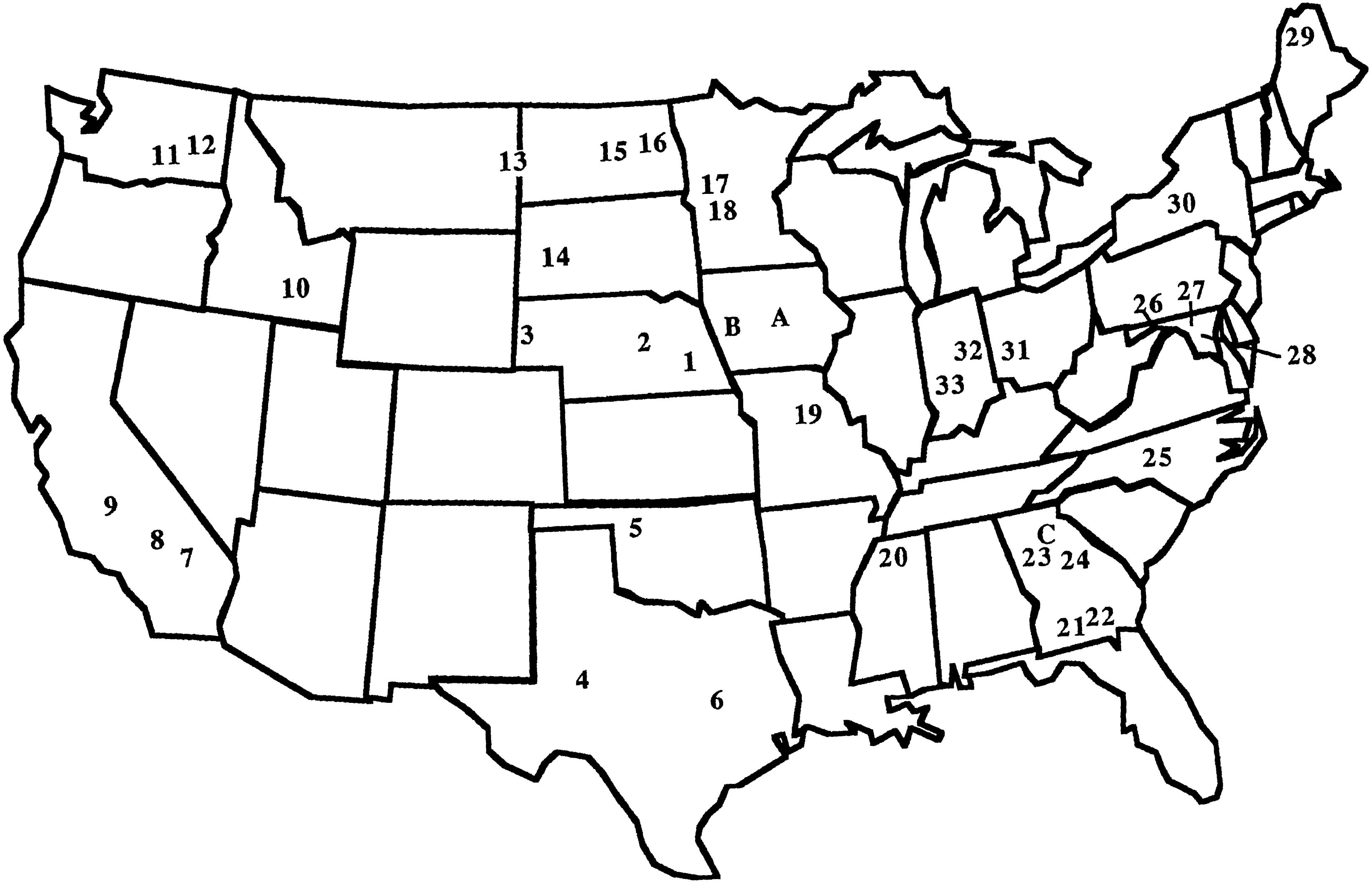

Figure 1. Location of WEPP cropland erosion sites

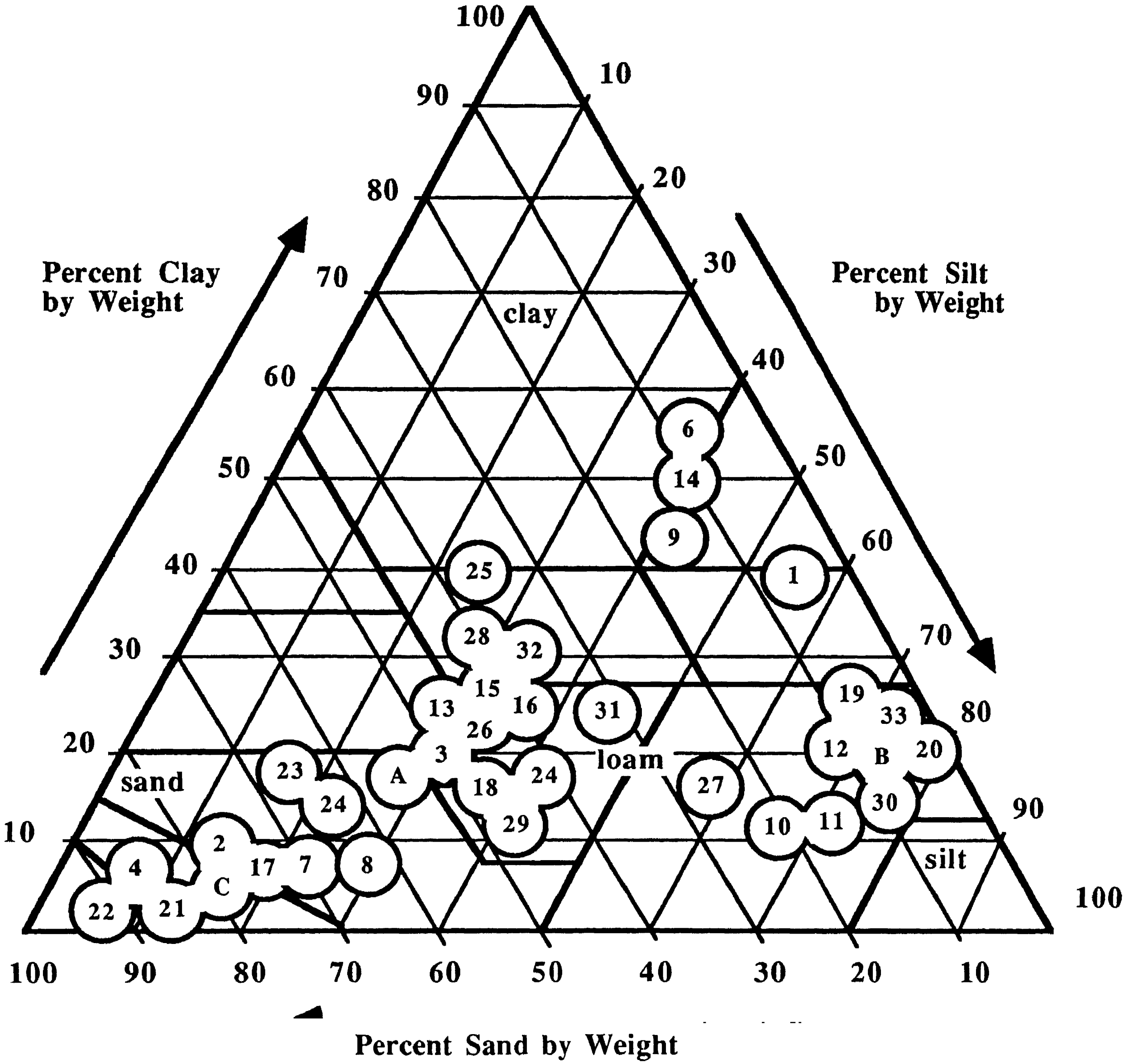

Figure 2. Textural Triangle showing location of WEPP cropland soils

Infiltration and interrill plots were established on the outside of the rill plots (Figure 3). On the 1987 soils, two infiltration plots were uncovered, and two were covered to prevent crusting (Liebenow et al., 1989). In 1988, all four infiltration plots were covered. All of the plots were within the wetted diameter of a rotating boom rainfall simulator (Swanson, 1965).

The rainfall simulator was equipped with Veejet 80100 nozzles which were operated at a pressure to give an intensity of about 62 mm hr^{-1}. Rain gages were installed immediately uphill from each infiltration and interrill plot. The total amount of water used was recorded by a water meter.

During the set-up procedure, samples for bulk densities were taken from each rill plot and near two infiltration plots using the compliant cavity technique (Barnes et al., 1971). Additional samples of the topsoil were collected for future analysis. Soil moisture samples from the surface layer, and a second layer 250 to 300 mm below, were collected near the infiltration plots.

The erosion data collection was divided into three periods:

1) Rainfall only until flow equilibrium was achieved from the rill plots.
2) Rainfall plus flow added in increments at the head of each rill.
3) Flow increments added at the head of each rill with no rainfall.

The beginning and ending times of periods one and two are recorded on page B2.

During the first period, runoff samples were collected from the interrill and infiltration plots every five to ten minutes. Rill runoff observations were made every five minutes from the onset of runoff until runoff equilibrium was reached, when there was no apparent increase in runoff for two subsequent observations. The time required to reach flow equilibrium varied from 30 to 90 minutes.

Once rill flow equilibrium had been reached, maximum velocities of the flow in each rill were measured by injecting fluorescent dye at an upstream marker, and using a stopwatch to note the time required to reach a marker six meters downstream. The rainfall was then stopped and rill cross-sectional shapes were recorded with a rillmeter. Soil strength measurements were made.

During period two, rainfall was resumed and the outflow was measured until a flow similar to that observed at the end of period one was reached. Flows were then added at the top of each rill from a pvc manifold with in-line flow restrictors at pressures set to give a desired flow rate. Nominal added flow rates of 7, 14, 21, 28, and 35 liters per minute were used. Flow rates were measured by weighing the outflow from each rill, collected in a bucket over a fixed time period. For each rill at each flow addition, two flow rate observations and one velocity measurement were made, and two sediment concentration samples were collected.

During 1987, upon completion of the second period, fall cone penetrometer strengths and observations on rill headcuts were made (Kohl et al., 1988b). For both years, rill shape observations were made using a rill meter. Soil moisture samples were collected at two depths from selected interrill plots.

For the third period, a final set of flows were added, but this time with no rainfall. The same observations on flows, velocities, and sediment concentrations were made as for period two.

For each flow rate during periods two and three, a set of black and white stereo photographs was taken by two air-photo cameras mounted 10 m apart, 15 m above the site.

Following period three, final strength measurements and rill meter measurements were made. Bulk density measurements were carried out for each rill, and for two infiltration plots. In 1987, the fall cone was not used, but details on rill headcuts were noted.

Outside the wetted circle of the simulator, the soil surface was wetted by filling a 750 mm diameter ring with about 100 mm of water. The water was allowed to infiltrate, and soil strength measurements were carried out on the external plot at varying times once excess water had infiltrated.

A field laboratory, equipped with balances, drying ovens, and a sink, accompanied the field experiments. The runoff and sediment concentrations from the interrill plots, and the sediment concentrations from the rills were found gravimetrically from the one-liter samples in the laboratory. Soil moisture contents were also determined gravimetrically.

Sediment size distributions of the eroded sediment were measured in the field laboratory using methods described by Meyer and Scott (1983). Samples from two interrill plots and two rill plots were collected at the end of period one. Additional samples from the same two rill plots were collected at the end of periods two and three. The samples were wet sieved using 1000, 500, 250, 125, and 63 micron sieves, and then pipetted to the 4 micron size. During 1987, half of the samples from each site were wet sieved down to 38 microns.

DATA ANALYSIS TECHNIQUES

All results from field and laboratory measurements were entered into portable computer spreadsheets. Subsequent analyses were done with spreadsheets and Basic programs on personal computers, and on a main frame computer.

It was noted that the erosion rates from interrill erosion varied with time, with the initial erosion rates at low runoffs being near zero. The erosion rates would then increase to either an equilibrium value on clays and sands, or a maximum value followed by decreasing rates on many of the silt soils. The mean of the last four erosion rates was selected as the erosion rate for a given plot.

If there was an outlier value within the last four erosion rates, then it was not considered, and the four most consistent of the last five values were used. The plot mean was divided by the slope factor (equation {3}) and the square of the plot rainfall intensity in $m^2\ s^{-2}$, to calculate a K_i for the plot. The means of the eight uncovered plots in 1987, and means of the six ridged plots in 1988 were used to calculate K_i.

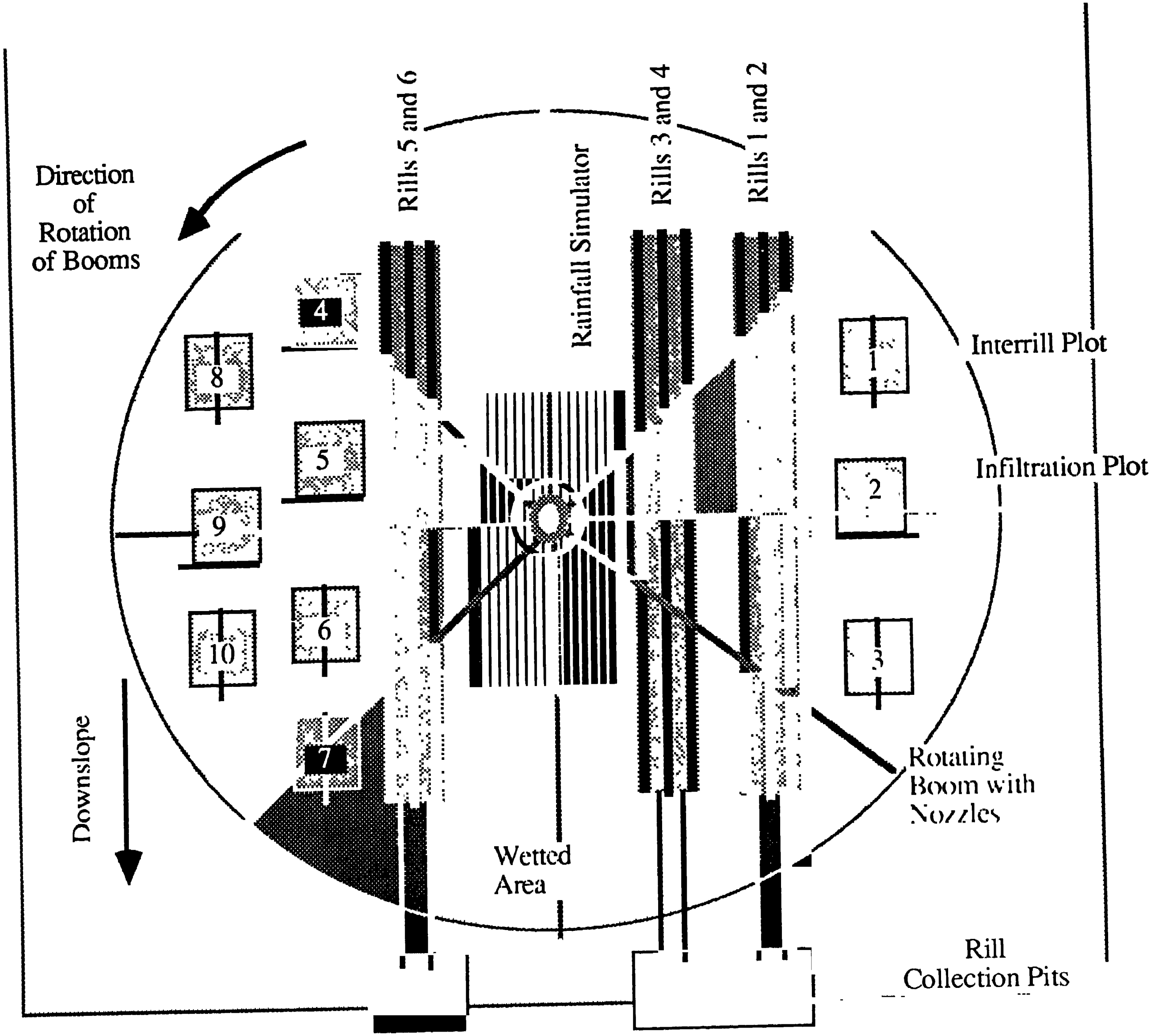

Figure 3. Plot plan of WEPP cropland erosion site

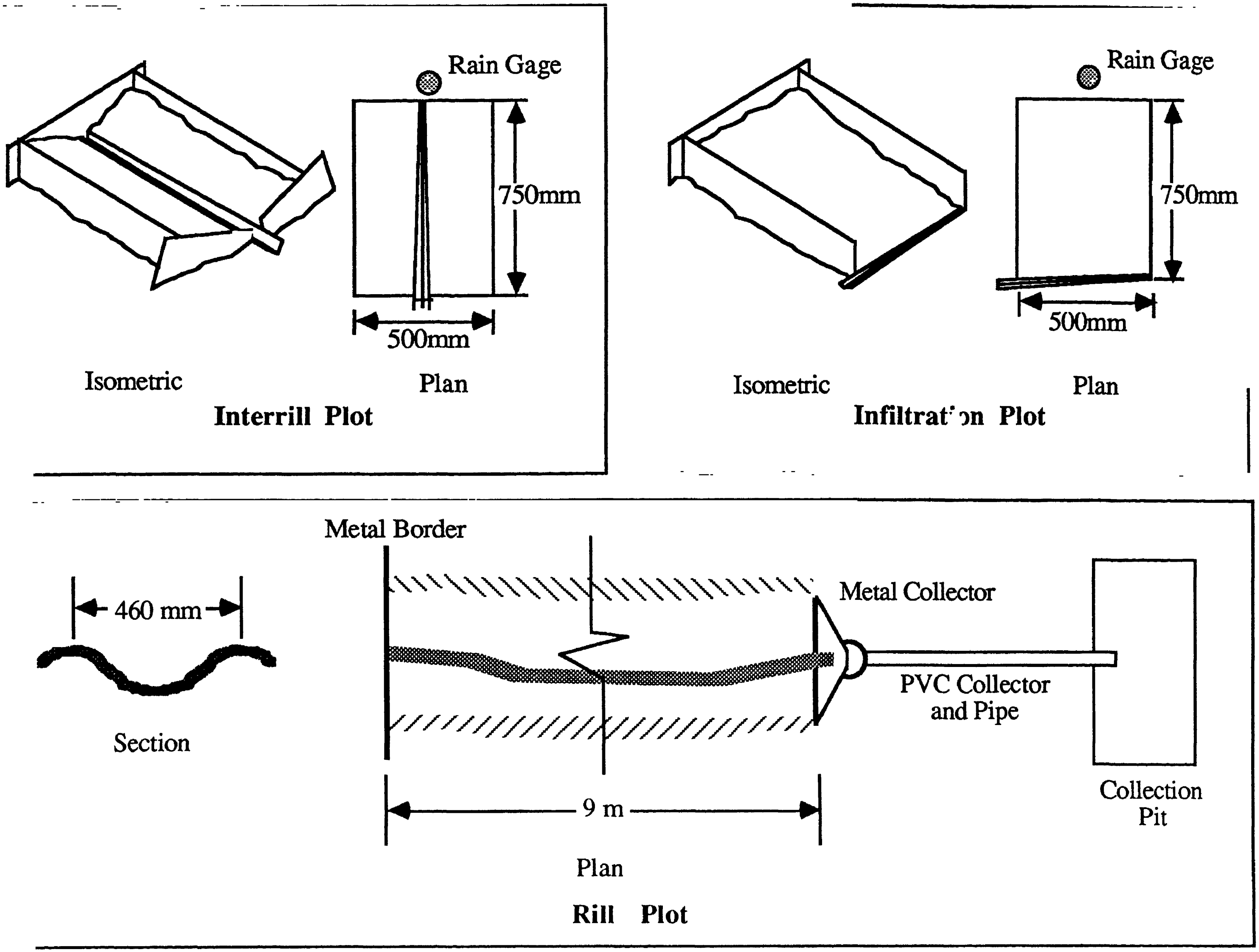

Figure 4. Details and dimensions of interrill, infiltration, and rill plots

To calculate K_r, it was first necessary to calculate the hydraulic radius for each level of rill flow. To find the hydraulic radius, the rill flow "maximum" velocity was observed using a fluorescent dye and recording the length of time required for the front of a slug of dye to travel six meters down the rill. An influorometer was used on four sites to measure the concentration of dye in the rill outflow. The time required from the injection of dye six meters uprill, until the peak concentration of dye was observed by the influorometer, was used to calculate an average velocity. The ratios of maximum velocity to average velocity were found to be 0.551 for sandy soils with relatively wide, shallow rills, and 0.687 for silt soils with narrow deep rills, and clay soils with trapezoidal shaped rills. The measured rill flow rate was then divided by the average velocity to determine an average cross-sectional area of flow.

Cross-sectional shapes of rills were recorded using a rill meter. In 1987, the rill meter was photographed and the location of the pins subsequently noted manually from 35 mm slides. In 1988, the rill meter pin locations were located using an image analyzer. On photographs taken by the air photogrammetric cameras, rill channel flow widths were measured to determine the average width of channel for each rill, for each flow rate.

The cross-sectional area and the rill meter pin locations were read by a Basic computer program on a PC, and the location of the water surface necessary to give the calculated area was found using a Secant Search Technique. The program then calculated a width of flow and a hydraulic radius (Kohl et al., 1988a). If the width necessary to give the desired area differed more than 10 mm from that observed on the photographs, the rill meter pin locations were modified to effectively alter the rill width, and the program was run again. This procedure was iterated until the width of the rill was the same as that found from the photograph, and the hydraulic radius for a given flow rate was found (Elliot et al., 1989b).

The transport capacity of the flow in the rill was estimated from the relationship (Foster and Meyer, 1972a):

$$T_c = w_r B \tau^{1.5} \qquad \{10\}$$

where: T_c = Transport capacity of rill, kg sec^{-1}
w_r = Width of rill, m
B = Transport coefficient for a given soil
τ = Hydraulic shear of the flowing water, Pa

To find the transport coefficient (B), transport coefficients were first estimated for each category in the aggregate size distribution of the eroded sediment and for the range of observed water temperatures using Yalin's bedload transport equation (Yalin, 1963). A weighted average based on the aggregate size distribution and water temperature for each soil was then carried out (Elliot, 1988). The transport coefficients used for each soil are noted on the heading of each soil's respective rill data analysis worksheet found on pages B135 to B237.

The transport capacity (T_c), the rill width (w_r), and the observed rate of sediment leaving each respective rill (Q_s), were then used in equation {9} to calculate the detachment capacity for each flow rate. From this set of detachments and respective hydraulic shears, values for K_r and τ_c were calculated by linear regression. D_c' was then be calculated from equation {4} and substituted back into equation {9}. After several iterations, values for K_r and τ_c for each rill for the rain with added flow, and the added flow only conditions were found.

RESULTS and DISCUSSION

BEGINNING AND ENDING TIMES OF RAINFALL

The soil number, series name, textural classification, nearest town to site, and date of erosion are presented on page B2. The clock times for the start and end of periods one (Rain Only) and two (Rain and Flow Addition) are also given on page B2. The "sample" time for the Rain Only period was the clock time noted when there was sufficient runoff from the six rills to begin rill data collection.

WATER QUALITY ANALYSIS

The quality of the eroding water is presented on page B3. The chemical analyses were carried out by the SCS National Soil Survey Laboratory in Lincoln, NE. The chemical contents are listed in milliequivalents per liter. SAR is the sodium absorption ratio (USDA SCS, 1984), and is found by:

$$SAR = \frac{[Na^+]}{\sqrt{\frac{[Ca^{++}] + [Mg^{++}]}{2}}} \qquad \{11\}$$

where the chemical contents are in milliequivalents per liter. The observed water temperatures are in degrees Celcius.

BULK DENSITY and SOIL MOISTURE ANALYSIS

The results of the bulk density and soil moisture observations are presented on pages B4 to B36. The soil series and date of experiment are recorded in the heading. The "Before rain" samples were collected before period one. The "After rain" samples were collected after period two for the soil moisture analysis, and after period three for the bulk density analysis. The plot numbers refer to the rill and infiltration plots as numbered in Figure 3.

The bulk density "Depth" is the approximate depth of excavation for each of the observations. The bulk density is in grams of soil per cubic centimeter excavated. The moisture contents for the bulk density samples are recorded in both grams of water per gram of soil, and cubic centimeters of water per cubic centimeter of soil. The relationship between these two moisture contents is:

$$MC_{Volume} = MC_{Mass} \times \frac{BD}{\gamma} \qquad \{12\}$$

where γ = Density of water, g cm^{-3} (Hillel, 1982).

The "Depth" for the moisture content analysis is an approximate depth of sample obtained by the soil probe. The moisture content (MC) is in grams of water per gram of soil.

On the Sharpsburg site, the soil surface was covered with large, dry, hard clods 50 to 100 mm in diameter. The presence of the clods made it impossible to measure the bulk densities before the start of the experiment (page B4).

Because of a break in the field-data collection, the wet weights for the Heiden bulk density samples were not obtained, and so no estimate of the moisture content is recorded for this soil from the bulk density analysis (page B9).

On the Caribou site, the surfaces were covered with large stones at the completion of erosion. The stone cover was too great to allow the bulk density to be measured (page B32). Other samples that were lost have been noted in the results.

SOIL STRENGTH ANALYSIS

The soil strength observations from the rill plots are recorded on pages B37 to B45. Strength readings were made after period one. In 1987, the fall cone was used after period two, and the other strength readings taken after period three. In 1988, the fall cone was read after period three along with the other strength readings. Observations were made at distances of 2, 5, and 7 meters from the tops of rills 2, 4, and 6 (see Figure 3). The units for the torvane, internal vane, and pocket penetrometers are in kPa. For the fall cone penetrometer, a strength index (Towner, 1973) is recorded from:

$$\text{Fall Cone Index} = \frac{M}{D^2} \qquad \{13\}$$

where: M = Mass of fall cone point and shaft, g
D = Displacement of fall cone, cm

The torvane and pocket penetrometer (Penetrometer) measurements were carried out on both the side and the bottom the rill at each observation location. The fall cone penetrometer (Fall Cone) and internal vane (Inter. Vane) observations were made on the rill bottom.

The fall cone results presented are the means of three observations at each location. Because of the form of equation {13}, when the fall cone registered a very low fall displacement due to a rock or root located immediately beneath the tip, a very large index was calculated.

Where no sample was taken because a restrictive layer had been reached, "*NS*" was entered in the table. In 1987, no internal vane readings were taken on some soils, and these sections of the results have been left blank (pages B37 and B38).

SOIL STRENGTH ANALYSIS OF EXTERNAL TEST PLOT

The soil strength observations from the external plot are presented on pages B46 to B49. Units are the same as for the rill plots. The times recorded are clock times, but the time of wetting the plot has not been recorded. When more than a single observation was made with a torvane or penetrometer, all readings have been recorded. The fall cone readings are all based on the average of three readings.

SEDIMENT SIZE DISTRIBUTION

A summary of the sediment size analysis is presented on pages B50 to B56. The results combine the aggregates and particles that were retained on the seives, for all sizes over 63 microns. For under 63 microns, a particle bulk density of 2.63 was assumed in the calculaton of the respective pipetting times for each analysis.

Plots 6 and 8 were interrill plots and plots 3 and 5 were rill plots (see Figure 3). Under "Type", I refers to interrill, and R to rill. In the time column, A was sampled near the end of period one, B near the end of period two, and C near the end of period three.

The percentage of soil by weight is given for each size category. The 32 to 63 micron size contains the "remainder" that was not accounted for in all of the smaller size classes. Those values in the 32-63 micron range, formatted to four decimal places, are the sum of the sediment retained on a 38 micron sieve and the greater than 32 micron size category in pipetting.

Any negative percentages are a result of small discrepancies in sampling and weighing during pipetting. The large negative values noted for Williams are suspected to be due to a failure to calibrate the laboratory balance prior to carrying out the final mass observations for this soil. For a discussion of the possible sources of error in the analysis method, refer to Meyer and Scott (1983).

INTERRILL DATA

The results from the interrill runoff samples are presented on pages B57 to B122. The number and shape are given for each plot (Figure 3). The rainfall rate (INTENSITY) collected at the upslope side of each plot (Figure 4) is given in the first column. The clock time is the time from the start of rainfall until the start of the respective sample collection. The runoff flow rate is in millimeters per hour. The erosion rate is in grams per minute per square meter. The concentration of sediment in the runoff (Conc.) is listed in the final column in grams per liter. The four detachment values that were used to calculate K_i have been underlined. In cases where one of the final four values was not considered as a true indication of the erosion rate, the reason for not selecting that value has been noted.

The most common sources of error during sampling these plots were from mud splashed into the bottle by the person collecting the sample, the bottle overflowing, the bottle tipping over, or runoff leaking around the sampling trough. Much of the erosion observed on the covered plots was probably from raindrop induced splashing into the collection trough from outside the plot. Another source of variation between plots was due to the angle at which the rainfall contacted the plots because of the horizontal velocity imparted to the drops by the simulator. This effect, which lead to differences between the left side and right side plots was **not** found to be statistically significant (Liebenow et al., 1989).

On some sites, wind may have influenced the rainfall distribution. The rainfall and erosion of those plots located near the outside of the wetted area on the side facing the wind were sometimes lower than the other plots. An example of this can be seen on the Hersh results where the three plots furthest downslope, plots 3, 7, and 10 had rainfall intensities about 20 percent lower than the other seven plots.

One complete set of plot data, plot 8 on the Heiden clay, was not used because the erosion rates were much lower than had been observed on the other Heiden plots. Field notes stated that the thickness of the topsoil on this plot was less than on the others, and this may account for the lower runoff and erosion rates observed.

During 1988, additional runoff samples were collected from plots 4 and 5 during period two. The intensity during this period as well as the runoff observations are recorded. The time recorded for these samples is from the beginning of the rainfall for period two (see page B2).

Several crates of bottles were dried before initial weighing on the Tifton site. For these plots, only the sediment content was available to allow calculation of the erosion rate.

INTERRILL ERODIBILITY ANALYSIS

The calculation of interrill erodibility, K_i, is shown on pages B123 to B126. "Plot" refers to the plot number (Figure 3). "Type" is entered as "R" for ridged, interrill plots, and "F" for flat, uncovered, infiltration and erosion plots. The "Side" column indicates the side of the simulator on which the plots were located, when facing down-slope. The plot means of the four Erosion rates underlined on the INTERRILL DATA on pages B57 to B122 are entered as D_i. "I" is the rainfall intensity for each respective plot in millimeters per hour.

"Slope" is expressed as a percentage. For the flat infiltration plots, the slope was that of the nearest rill plot. For the ridged, interrill plots, the slope was calculated from topographic data available from photogrammetric analysis when available, or was assumed to be 57 percent on clays and 60 percent on silts for 1987, and 51 percent on all soils for 1988. The slope factor (Equation {3}) is not sensitive to variations in slopes at these magnitudes. K_i was calculated by solving Equations {2} and {3} for Ki:

$$K_i = \frac{D_i}{I^2 \left(1.05 - 0.85\exp^{(-4\sin(s))}\right)} \qquad \{14\}$$

The units have been standardized to give K_i in kg s m^{-4}. The means are presented for each soil. The standard deviations and coefficients of variation for each soil are included in the summary on pages B268 to B273.

RAIN ONLY DATA FOR RILLS

The runoff rates and sediment concentrations from the rill plots for period one are reported in pages B127 to B134. The clock time recorded in the first column applies to all rills. The starting time for each site is found on page B2. The rill flows are given in liters per minute, and the sediment concentration of the outflow in grams per liter. Because no velocity measurements or photographs were taken during this period, it was not possible to calculate a rill width, hydraulic radius, or erosion rate for a given area, or erodibility. The time required to reach flow equilibrium varied with soils, so there are different sizes of data sets.

The sediment contained in the runoff during this low-flow period was detached by interrill erosion, and depended on the rill flow to transport it to the outlet. On most soils, there was net deposition in the rill bottom during these periods.

No runoff occurred during period one for the Bonifay series due to the high infiltration rates. Other missing data resulted from spilled bottles or other problems encountered during sampling or laboratory analysis.

RILL DATA ANALYSIS

The data used to calculate the rill erodibility are presented on pages B135 to B 237. The heading for each soil summarizes the date, specific weight of water (γ), the transport coefficient (B), the Kinematic viscosity (μ), the velocity factor, and the mean interrill detachment rate (D_i). Some of the D_i's used differed slightly from the final values found in the interrill analysis, but the small discrepancies would have a negligible effect of the rill erodibility, and so they were not altered. The specific weight and the viscosity were based on the observed water temperature. The slope for each rill is recorded in the first line of each individual set of rill data.

In the source column, the codes refer to the nominal flow addition rates. R+0 was rain plus zero flow addition, R+2 was rain plus 2 gallons per minute, F+2 was flow addition only (no rainfall) at 2 gallons per minute, etc. The outflow rate is in liters per minute.

The maximum velocity (M Vel) observed during the dye addition is in meters per second. The average velocity (A Vel) in meters per second, is the maximum velocity multiplied by the Velocity Factor given in the heading. The Area in square centimeters is the observed Flow divided by the average velocity.

The widths (w_r), in centimeters, were measured on site photographs for each flow rate for period two. On Sharpsburg, and on all soils for period three, the iteration to ensure that the calculated widths matched the observed widths was not carried out. No photographs to measure widths were available for Sharpsburg, and time has not been available to carry out this analysis for period three. For these observations, the cross-sections from the rill meter **before** a given set of flows were used for R+0, R+2, R+4, R+6, F+2, F+4, and F+6. The cross-sections from the rill meter **after** the event were used for R+6, R+8, R+10, F+6, F+8, and F+10. For the R+6 and F+6 conditions, both the before and the after results were used in the regression analysis to find K_r and τ_c.

The hydraulic radius (r_h) in centimeters was found by methods discussed on pages A12 and A13, from the width, the cross-sectional area, and the rill meter data. The sediment transport rate, Q_s, is the product of the flow and the concentration, in grams per second. The hydraulic shear (τ) in Newtons per square meter, was calculated by equation {5}:

$$\tau = \gamma r_h s \qquad \{5\}$$

where γ is the density of water and s is the rill slope. The transport capacity of the rill, T_c, in grams per second, was calculated by equation {10}:

$$T_c = w_r B \tau^{1.5} \qquad \{10\}$$

The transport coefficient, B, is given in the heading for each soil, and the rill width is w_r.

The interrill contribution to detached sediment, E, in grams per second per square meter of rill, was found by the following formula:

$$E = D_i \frac{\text{Rill Spacing} - w_r}{w_r} \qquad \{15\}$$

The interrill detachment rate, (D_i) is in the heading, and the rill spacing was 460 mm. E was zero during period three.

The rill detachment rate, D_r, in grams per second per square meter, was found by dividing the sediment transport rate, Q_s, by the rill length and width, and then subtracting the interrill contribution, E. The rill flow detachment capacity, D_c, in grams per second per square meter, was found by equation {9}:

$$D_c = -\frac{T_c}{w_r L} \ln\left(1 - \left(\frac{Q_s}{w_r T_c}\right)\left(\frac{D_c'}{D_c' + E}\right)\right) \qquad \{9\}$$

In those cases where the expression for D_c, given by equation {9}, was undefined because the argument of the logarithm was negative, D_c was set equal to D_r. In cases where shear was less than τ_c, D_c was set equal to zero.

The dimensionless Darcy-Weisbach friction factor, F, was found by the following equation:

$$F = \frac{8\, g\, r_h\, s}{(A\ Vel)^2} \qquad \{16\}$$

where g is the acceleration due to gravity (Chow, 1959).

The dimensionless Reynold's number is defined as:

$$Re = \frac{(A\ Vel)\, r_h}{\mu} \qquad \{17\}$$

where μ is the kinematic viscosity given in the heading (Chow, 1959).

On the Woodward soil, a nonerodible layer was reached at the end of the second period. This may have occurred near the end of period three on other soils, but not to the extent that was observed at Woodward.

K_r, τ_c, K_i SUMMARY

The summary of K_r, τ_c, and K_i values are shown in Figures 5, 6, and 7, and presented on pages B268 to B273. The mean, standard deviation, and coefficient of variation are given for each soil. Regressions were carried out for both detachment rate, D_r, and detachment capacity, D_c, as a linear function of shear, τ. The results of both regressions are presented.

Those sets of K_r and τ_c in brackets were considered to be outliers, and were not used in calculating the mean and standard deviation. Where "`unstable`" has been entered for a given rill, the iteration method to find K_r and τ_c did not converge.

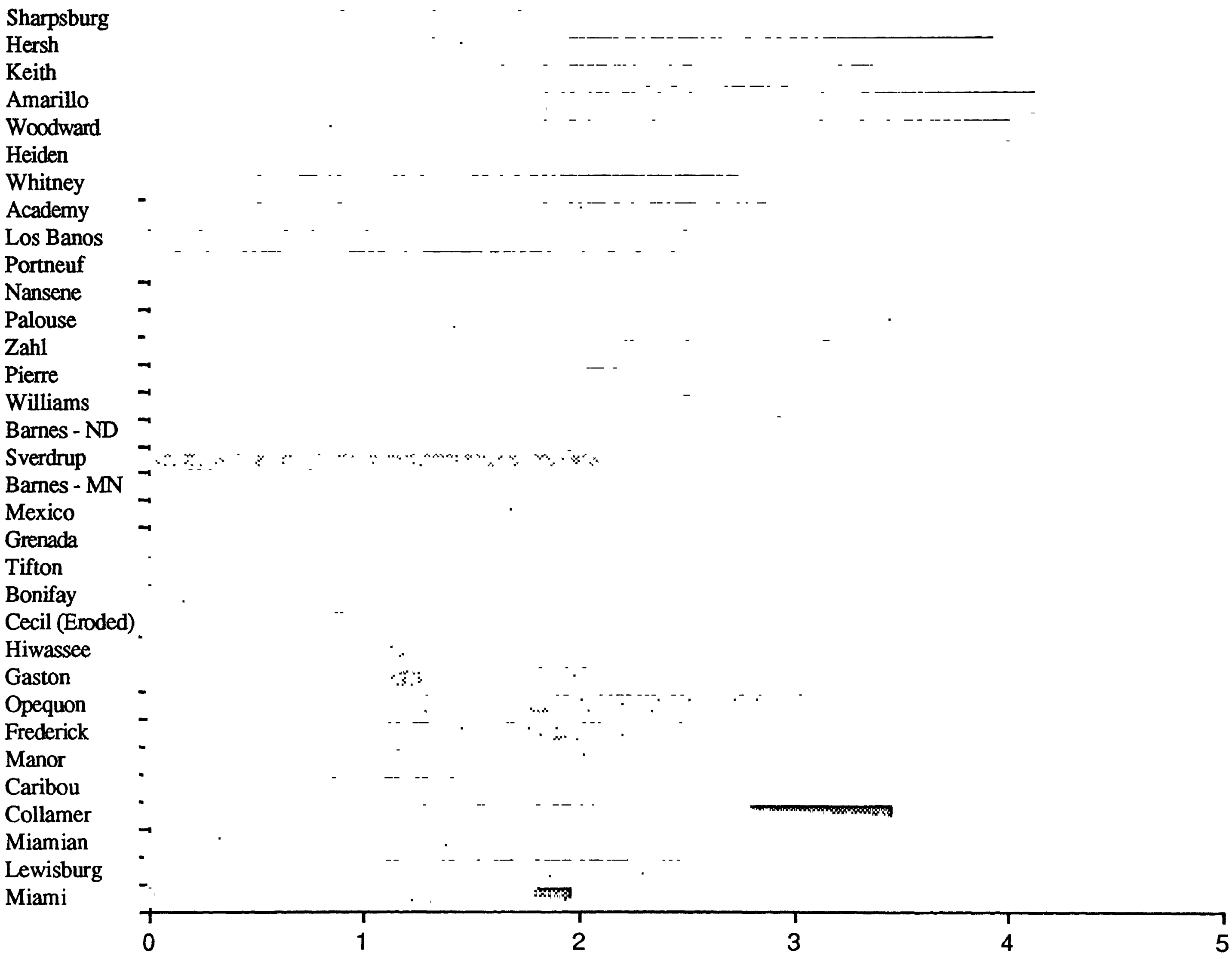

Figure 4. Calculated values of Interrill Erodibility, $K_i \times 10^{-6}$ kg s m^{-4}

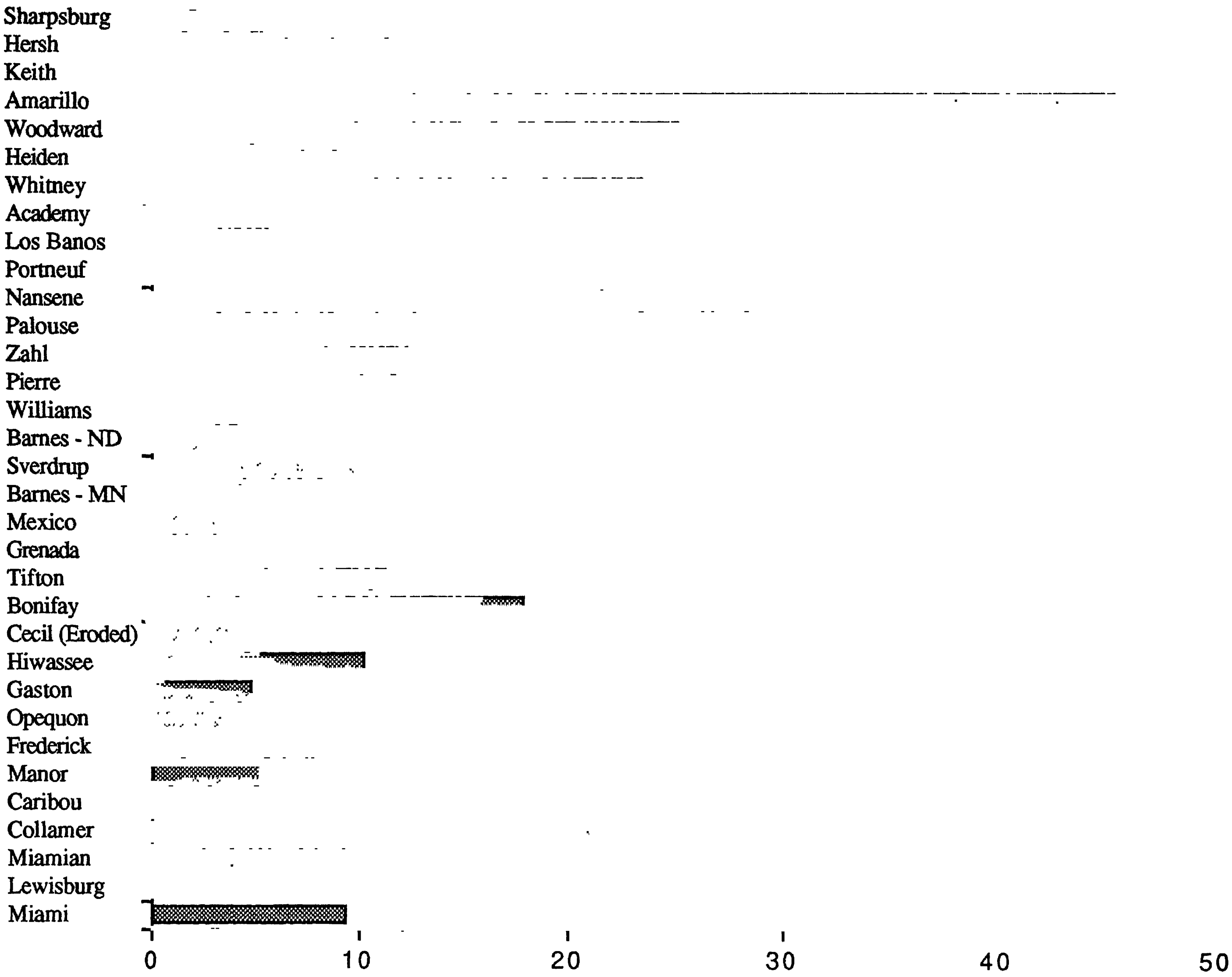

Figure 5. Calculated values of rill erodibility, K_r, s m^{-1} x 10^3

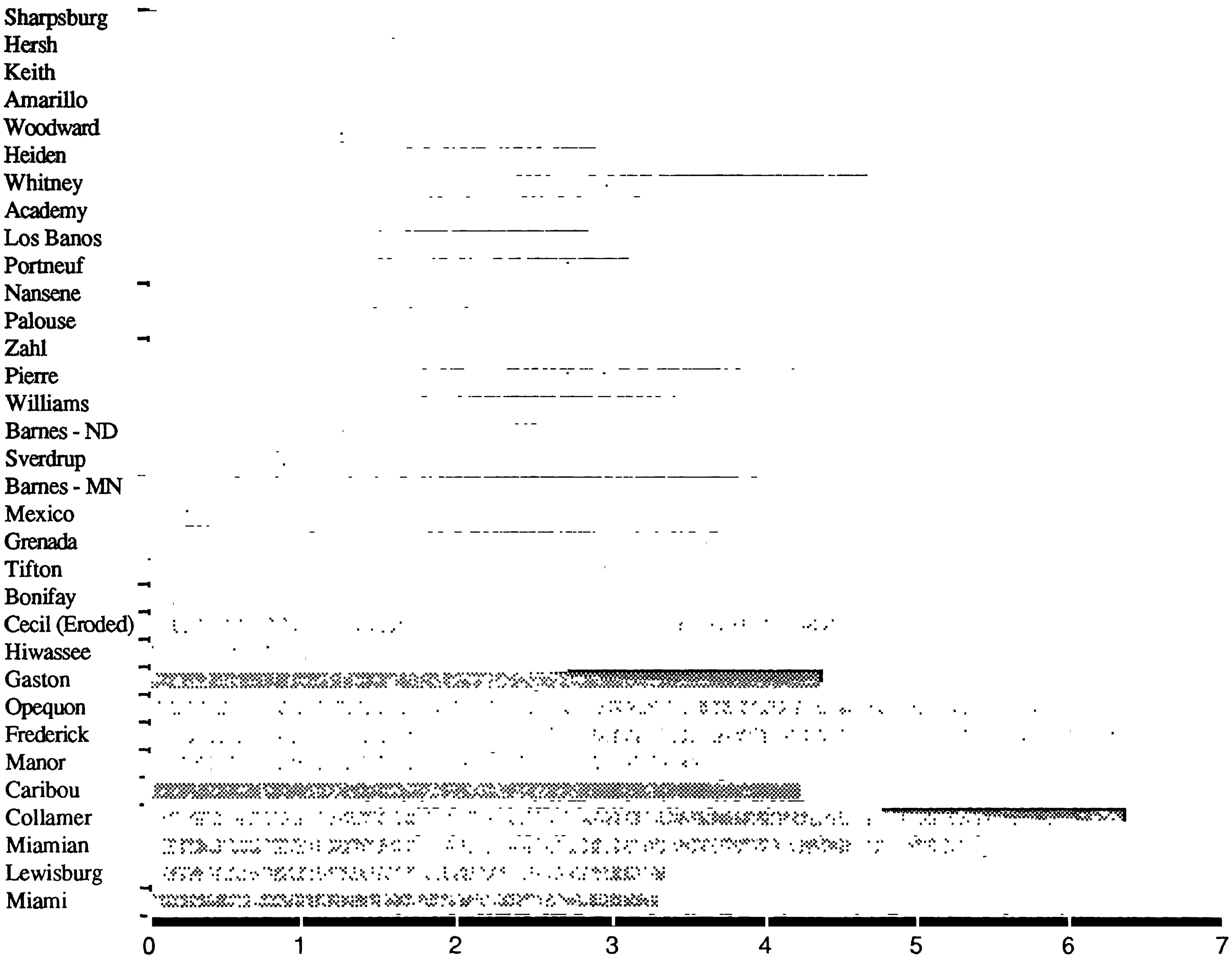

Figure 6. Calculated values of critical shear, τ_c, Pa

The critical shear for Keith on Figure 6 has been shown as zero, and not the calculated value of -2.8.

SOIL PROPERTIES ANALYSIS

A summary of the soil properties measured by the SCS National Soil Survey Laboratory is given on pages B274 to B275. These properties are from the A horizon of the central pit. Other horizons, and other pits were also sampled, and other properties were analyzed, but the presentation of the 2500 pages containing these results was beyond the scope of this publication. The methods for finding these properties were described by USDA SCS (1984 and 1989).

The clay, silt, very fine sand (VF Sand) and water dispersible clay are given as percentage of the sample that passed through a 2 mm sieve. The very fine sand is included in the total sand content. The rock is the percentage of the total soil sample that was greater than 2 mm.

The coefficient of linear extensibility (COLE) denotes the fractional change in clod dimension from a dry to a moist state. When coarse fragments are absent:

$$\text{COLE} = \left(\frac{Db_d}{Db_m}\right)^{1/3} - 1 \qquad \{18\}$$

where: D_{bm} = Bulk density of a moist clod at $\frac{1}{3}$ bar moisture tension

D_{bd} = Bulk density of a dry clod at 15 bar moisture tension

The soil moisture retained by a soil sample at $\frac{1}{3}$ bar moisture tension and at 15 bar moisture tension, in percent by weight, are given in the 1/3 B and 15 B columns.

The percentage of aggregates in the 2-1 mm range that were soaked overnight and then retained on a 0.5 mm sieve after 20 oscillations are recorded as the aggregate stability (Ag Stab).

The surface area of a soil sample can be found using ethylene glycol monoethyl ether (EGME) retention. The amount of EGME retained is presented. This value can be converted to surface area by the relationship:

$$\text{Surface area}\left(\frac{m^2}{g}\right) = \frac{\text{EGME Retained (mg/g)}}{0.286} \qquad \{19\}$$

The contents of Calcium (Ca), Magnesium (Mg), Sodium (Na), and Potassium (K) are given in milliequivalents per 100 grams, as found by atomic absorption. The cation exchange capacity (CEC) in milliequivalents per 100 grams as found by Ammonium Acetate titration is presented. Iron and aluminum contents given in percentages were found using dithionite-citrate extraction methods.

The sodium absorption ratio (SAR) was found by:

$$\text{SAR} = \frac{[Na^+]}{\sqrt{\frac{[Ca^{++}] + [Mg^{++}]}{2}}} \qquad \{11\}$$

where Na, Ca, and Mg are in milliequivalents per liter.

The conductivity in micromhos was measured in a paste of the soil. The percentage of organic carbon (Org C) was found by acid-dichromate digestion. The percentage of calcium carbonate was found using HCl treatment.

LOCATIONS

Descriptions of the locations of each erosion site, as provided by the SCS soil survey report, are summarized on pages B276 to B278.

MAPS

Sketch maps showing the approximate location of each site are presented from page B279. Local assistance should be obtained to pinpoint exact plot locations.

ACKNOWLEDGEMENTS

The authors wish to thank the numerous individuals who have been of assistance in planning, collecting, and analyzing this data. The list starting on page B288 includes:

- ARS scientists, technicians, administrators,and secretaries who helped plan, coordinate, and carry out the project, and who shared research facilities and equipment
- University faculty and staff who helped coordinate the experiment, shared research facilities, and assisted with data collection and analysis
- Undergraduate and graduate students from several universities who assisted in data collection and analysis
- SCS field and laboratory staff who assisted in identifying sites, carrying out site soil analyses, collecting data, and identifying and analyzing soil properties
- Farmer cooperators and land owners who allowed access to their fields, prepared experimental sites, and assisted with data collection

The first name listed under each soil was the contact person for that site. Without the cooperation and assistance of these individuals the completion of this major research project would not have been possible. The authors wish to apologize if any individuals have been unintentionally overlooked.

SUMMARY

In summary, 33 soils were treated in a similar manner to measure on-site erodibility. From the data collected, the interrill erodibility (K_i), the rill erodibility (K_r) and the rill critical shear (τ_c) were determined. The resulting data set also provided infiltration, surface crusting, and rill hydraulic data.

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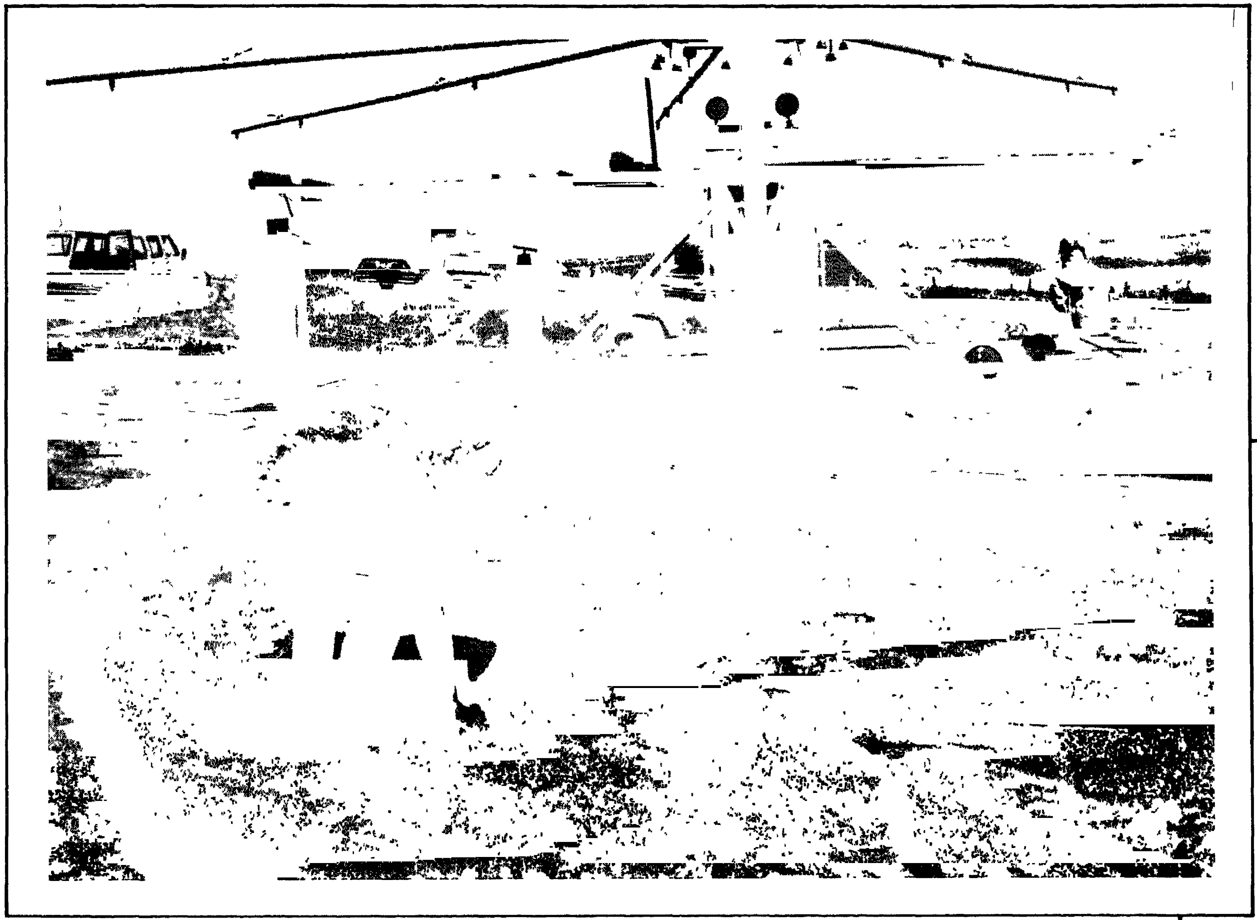
Part B: Results of Data Collection and Analysis for WEPP Cropland Soils



BEGINNING AND ENDING TIMES OF RAINFALL

	Name	Type	Location	Date	Rain Only Time (hr:min)			Rain and Flow Addition Time (hr:min)		
					on	sample	off	on	sample	off
1	Sharpsburg	Silty Clay	Lincoln, NE	May 19, 1987	10:50	11:50	12:45	1:30	1:55	2:16
2	Hersh	Sandy Loam	Ord, NE	May 21	9:22	9:53	10:34	11:20	11:25	11:46
3	Keith	Silt Loam	Albin, WY	May 23	10:12	10:28	11:03	11:49	11:54	12:13
4	Amarillo	Loamy Sand	Big Spring, TX	May 28	12:46	1:06	1:46	2:30	2:35	3:03
5	Woodward	Silt Loam	Buffalo, OK	June 1	1:00	1:22	2:02	2:52	2:58	3:17
6	Heiden	Clay	Waco, TX	June 6	1:28	2:00	2:42	3:24	3:33	3:57
7	Whitney	Sandy Loam	Fresno, CA	June 29	1:39	2:00	2:40	3:22	3:30	3:54
8	Academy	Loam	Fresno, CA	June 30	1:46	1:58	2:41	3:24	3:31	3:48
9	Los Banos	Clay	Los Banos, CA	July 1	3:34	4:11	4:59	5:50	5:57	6:24
10	Portneuf	Silt Loam	Twin Falls, ID	July 6	9:50	10:30	11:20	11:58	12:12	12:29
11	Nansene	Silt Loam	Pullman, WA	July 8	10:21	10:53	11:34	12:17	12:27	12:45
12	Palouse	Silt Loam	Pullman, WA	July 9	12:43	1:03	1:40	2:18	2:23	2:41
13	Zahl	Loam	Bainville, MT	July 13	11:45	12:11	12:49	1:21	1:30	1:47
14	Pierre	Clay	Wall, SD	July 31	11:30	11:56	12:32	1:22	1:30	1:51
15	Williams	Loam	McClusky, ND	August 3	12:37	1:07	1:38	2:22	2:30	2:57
16	Barnes - ND	Loam	Goodrich, ND	August 4	12:17	12:47	1:28	2:11	2:20	2:45
17	Sverdrup	Sandy Loam	Morris, MN	August 6	8:54	9:23	10:09	10:43	10:52	11:11
18	Barnes - MN	Loam	Morris, MN	August 7	8:44	9:15	9:56	10:35	10:42	11:01
19	Mexico	Silt Loam	Columbia, MO	June 1, 1988	12:32	12:53	1:33	2:26	2:33	2:55
20	Grenada	Silt Loam	Como, MS	June 3	11:47	12:10	12:53	1:35	1:45	2:04
21	Tifton	Loamy Sand	Tifton, GA	June 6	1:01	1:34	2:06	2:45	2:45	3:16
22	Bonifay	Sand	Tifton, GA	June 7	1:15	*no sample*	2:19	2:48	2:57	3:26
23	Cecil (Eroded)	Sandy Clay Loam	Watkinsville, GA	June 9	9:23	9:52	10:31	11:05	11:12	11:38
24	Hiwassee	Sandy Loam	Watkinsville, GA	June 10	10:30	10:44	11:22	11:49	11:51	12:22
25	Gaston	Clay Loam	Salisbury, NC	June 13	12:57	1:38	2:02	2:35	2:41	3:06
26	Opequon	Clay Loam	Flintstone, MD	June 15	1:38	1:58	2:35	3:06	3:12	3:32
27	Frederick	Silt Loam	Hancock, MD	June 16	2:05	2:27	2:54	3:29	3:34	3:56
28	Manor	Loam	Ellicot City, MD	June 17	1:25	1:44	2:07	2:38	2:46	3:03
29	Caribou	Gravelly Loam	Presque Isle, ME	June 29	10:29	10:47	11:18	11:55	12:00	12:21
30	Collamer	Silt Loam	Ithaca, NY	July 2	12:35	12:46	1:18	1:51	1:56	2:14
31	Miamian	Loam	Dayton, OH	July 5	3:56	4:29	5:00	5:32	5:36	5:54
32	Lewisburg	Clay Loam	Columbia City, IN	July 7	9:54	10:15	10:42	11:10	11:15	11:33
33	Miami	Silt Loam	Waveland, IN	July 8	2:04	2:29	3:01	3:40	3:44	4:05

WATER QUALITY ANALYSIS

Soil	Ca	Mg	Na	K	HCO_3	Cl	SO_4	NO_3	SAR	Total Salts	Elec. Cond.	pH	Temp.
	<- - - - - - - - - - - meq/liter - - - - - - - - - - - - ->									%	mmhos/cm		°C
Sharpsburg	3.7	1.6	2.1	0.1	4.4	TR	1.5	1.3	1	TR	0.68	7.2	10.0
Hersh	5.4	1.4	1.1	0.3	4.1	0.1	2.2	0.2	1	TR	0.72	7.8	7.0
Keith	2.0	0.6	0.3	0.1	2.0	0.1	0.5	0.2	TR	TR	0.28	7.7	7.0
Amarillo	2.1	1.5	8.4	0.2	5.3	1.5	4.7	0.8	6	0.1	1.18	8.6	23.5
Woodward	10.1	11.8	11.3	0.2	4.0	10.8	19.4	---	3	0.2	3.01	8.3	25.0
Heiden	2.4	0.3	1.5	0.1	0.3	0.3	0.5	---	1	TR	0.43	8.5	24.0
Whitney	1.2	0.5	1.2	0.1	1.2	1.0	0.3	---	1	TR	0.31	7.1	25.5
Academy	0.3	0.1	0.2	TR	0.4	0.2	0.2	---	TR	TR	0.06	7.0	21.5
Los Banos	1.3	1.2	2.5	0.1	1.3	2.0	1.1	---	2	TR	0.55	7.3	24.0
Portneuf	3.8	2.4	4.0	0.1	5.6	1.4	2.1	---	2	TR	0.97	7.8	20.0
Nansene	1.1	1.1	0.9	0.1	2.5	0.2	0.3	1.1	1	TR	0.31	7.8	16.0
Palouse	2.4	1.3	0.9	0.1	3.2	0.6	1.0	---	1	TR	0.47	7.5	16.0
Zahl	2.8	2.0	2.9	0.1	3.0	0.5	4.1	---	2	TR	0.76	8.0	22.0
Pierre	0.2	TR	18.7	0.1	11.5	6.7	6.7	0.2	55	0.1	1.72	8.4	27.0
Williams	5.0	27.5	18.2	2.0	10.1	39.8	39.8	---	5	0.3	3.90	8.0	24.0
Barnes - ND	2.3	5.4	3.4	0.7	6.2	4.4	4.4	---	2	0.1	1.02	7.9	22.5
Sverdrup	1.2	4.1	0.9	0.3	3.7	1.8	1.8	---	1	TR	0.56	8.4	23.5
Barnes - MN	1.5	3.2	0.3	0.3	3.9	0.5	0.5	---	TR	TR	0.47	8.3	24.5
Mexico	0.8	0.2	---	0.3	0.6	0.3	0.4	---		TR	0.15	7.9	17.2
Grenada	0.2	0.1	---	0.2	0.1	0.2	0.2	---		TR	0.07	7.8	26.0
Tifton	0.2	0.1	---	0.1	0.1	0.2	0.2	---		TR	0.05	7.3	26.0
Bonifay	0.3	0.3	0.1	0.2	0.3	0.4	0.2	---	TR	TR	0.10	7.5	26.0
Cecil (Eroded)	0.2	0.1	0.1	0.1	0.2	0.2	0.2	---	TR	TR	0.08	7.6	25.0
Hiwassee	0.2	0.1	0.2	0.1	0.3	0.3	0.2	---	1	TR	0.08	7.5	23.0
Gaston	0.9	0.7	1.0	1.1	1.4	1.7	0.5	---	1	TR	0.44	8.1	26.0
Opequon	0.4	0.2	0.1	0.1	0.3	0.2	0.4	---	TR	TR	0.11	7.8	18.0
Frederick	2.0	0.3	---	0.1	1.8	0.1	0.3	---		TR	0.23	8.5	20.0
Manor	1.0	0.4	0.2	0.1	0.5	0.5	0.4	0.1	TR	TR	0.20	8.0	18.0
Caribou	0.9	0.2	0.1	0.3	0.9	0.3	0.3	---	TR	TR	0.16	8.1	16.0
Collamer	2.9	1.0	0.4	0.1	2.6	0.8	1.0	---	TR	TR	0.75	7.6	19.0
Miamian	4.7	2.5	0.6	0.3	5.1	0.9	1.3	0.1	TR	TR	0.74	7.8	26.0
Lewisburg	1.6	1.2	0.5	0.3	3.2	0.7	0.7	---	TR	TR	0.53	8.0	28.0
Miami	2.5	3.1	0.8	0.2	5.1	0.5	1.6	---	TR	TR	0.68	8.0	33.0

SOIL: SHARPSBURG DATE: MAY 19, 1987

BULK DENSITY ANALYSIS

Before rain

No bulk densities were taken before rain because of the large, hard clods which covered the surface.

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.38	0.50	0.69
	2-5	0.92	0.40	0.37
Rill 2	0-2	1.61	0.45	0.73
	2-5	0.80	0.43	0.34
Rill 3	0-2	1.22	0.44	0.54
	2-5	1.25	0.54	0.67
Rill 4	0-2	1.10	0.46	0.50
	2-5	1.10	0.16	0.17
Rill 5	0-2	1.41	0.43	0.61
	2-5	0.95	0.41	0.39
Rill 6	0-2	1.27	0.49	0.62
	2-5	1.44	0.50	0.72
Intr. 1	0-2	1.35	0.45	0.60
	2-5	1.00	0.38	0.38
Intr. 5	0-2	0.69	0.39	0.27
	2-5	0.74	0.38	0.28

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.06
	5-25	0.29
Intr. 5	0-5	0.06
	5-25	0.28
Intr. 6	0-5	0.06
	5-25	0.28

After rain

Plot	Depth cm	MC
Intr. 4	0-5	0.38
	5-23	0.40
Intr. 5	0-5	0.40
	5-23	0.38
Intr. 6	0-5	0.36
	5-17	0.36

SOIL: HERSH DATE: MAY 21, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.29	0.14	0.19
	2-5	0.99	0.14	0.14
Rill 2	0-2	0.85	0.12	0.10
	2-5	0.93	0.15	0.14
Rill 3	0-2	0.60	0.21	0.13
	2-5	1.63	0.27	0.45
Rill 4	0-2	0.68	0.24	0.16
	2-5	0.74	0.20	0.15
Rill 5	0-2	0.73	0.25	0.18
	2-5	1.54	0.26	0.40
Rill 6	0-2	1.23	0.18	0.23
	2-5	1.28	0.25	0.32
Intr. 2	0-2	1.22	0.10	0.13
	2-5	1.41	0.12	0.17
Intr. 9	0-2	1.20	0.12	0.14
	2-5	1.23	0.14	0.17

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.43	0.20	0.28
	2-5	1.94	0.22	0.43
Rill 2	0-2	1.35	0.23	0.31
	2-5	3.94	0.21	0.84
Rill 3	0-2	1.36	0.19	0.26
	2-5	2.17	0.18	0.39
Rill 4	0-2	1.58	0.19	0.29
	2-5	2.31	0.19	0.44
Rill 5	0-2	1.90	0.20	0.37
	2-5	2.05	0.19	0.39
Rill 6	0-2	1.63	0.16	0.26
	2-5	3.02	0.22	0.68
Intr. 2	0-2	1.05	0.22	0.23
	2-5	2.62	0.21	0.55
Intr. 9	0-2	2.11	0.17	0.36
	2-5	1.43	0.17	0.25

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.07
	5-25	0.11
Intr. 5	0-5	0.07
	5-25	0.11
Intr. 8	0-5	0.06
	5-25	0.10

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.22
	5-17	0.29
Intr. 5	0-5	0.24
	5-17	0.17
Intr. 6	0-5	0.21
	5-13	0.13

SOIL: WOODWARD DATE: JUNE 1, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.05	0.11	0.11
	2-5	0.62	0.13	0.08
Rill 2	0-2	1.06	0.11	0.11
	2-5	0.72	0.14	0.10
Rill 3	0-2	0.68	0.11	0.07
	2-5	0.86	0.13	0.12
Rill 4	0-2	0.66	0.12	0.08
	2-5	0.83	0.14	0.12
Rill 5	0-2	0.72	0.12	0.08
	2-5	0.76	0.14	0.11
Rill 6	0-2	0.65	0.10	0.07
	2-5	0.98	0.13	0.13
Intr. 2	0-2	1.05	0.08	0.08
	2-5	0.79	0.08	0.06
Intr. 9	0-2	1.03	0.07	0.07
	2-5	0.85	0.12	0.11

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.51	0.22	0.33
	2-5	1.51	0.21	0.32
Rill 2	0-2	1.77	0.23	0.40
	2-5	1.69	0.22	0.37
Rill 3	0-2	1.20	0.23	0.28
	2-5	2.27	0.20	0.46
Rill 4	0-2	2.19	0.20	0.44
	2-5	1.03	0.18	0.19
Rill 5	0-2	1.30	0.22	0.28
	2-5	1.56	0.20	0.31
Rill 6	0-2	1.45	0.22	0.32
	2-5	1.35	0.21	0.28
Intr. 2	0-2	1.31	0.24	0.32
	2-5	1.35	0.24	0.33
Intr. 9	0-2	1.36	0.28	0.38
	2-5	1.71	0.26	0.44

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.12
	5-25	0.17
Intr. 5	0-5	0.11
	5-25	0.15
Intr. 7	0-5	0.10
	5-25	0.17

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.27
	15-35	0.18
Intr. 5	0-15	0.27
	15-35	0.19
Intr. 7	0-15	0.28
	15-35	0.19

SOIL: HEIDEN DATE: JUNE 6, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	0.63	0.34	0.21
	2-5	0.54	0.36	0.20
Rill 2	0-2	0.52	0.34	0.18
	2-5	0.65	0.40	0.26
Rill 3	0-2	0.56	0.31	0.17
	2-5	0.73	0.34	0.25
Rill 4	0-2	0.39	0.37	0.14
	2-5	0.51	0.42	0.21
Rill 5	0-2	0.41	0.31	0.12
	2-5	0.61	0.32	0.20
Rill 6	0-2	0.51	0.32	0.16
	2-5	0.55	0.33	0.18
Intr. 2	0-2	0.70	0.28	0.19
	2-5	0.53	0.31	0.16
Intr. 9	0-2	0.64	0.27	0.17
	2-5	0.70	0.32	0.23

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	0.87		
	2-5	0.73		
Rill 2	0-2	0.88	*No wet weight recorded for after rain.*	
	2-5	1.24		
Rill 3	0-2	0.98		
	2-5	1.11		
Rill 4	0-2	0.82		
	2-5	1.11		
Rill 5	0-2	0.87		
	2-5	1.15		
Rill 6	0-2	1.13		
	2-5	1.40		
Intr. 2	0-2	0.82		
	2-5	1.16		
Intr. 9	0-2	0.69		
	2-5	0.96		

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.26
	5-25	0.30
Intr. 5	0-5	0.23
	5-25	0.30
Intr. 6	0-5	0.25
	5-25	0.31

After rain

Plot	Depth cm	MC
Intr. 4	0-8	0.44
	8-20	0.39
Intr. 5	0-8	0.45
	8-20	0.33
Intr. 6	0-8	0.48
	8-20	0.38

SOIL: WHITNEY DATE: JUNE 29, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.10	0.01	0.01
	2-5	1.55	0.01	0.01
Rill 2	0-2	1.47	0.01	0.01
	2-5	1.20	0.01	0.01
Rill 3	0-2	1.28	0.01	0.01
	2-5	1.29	0.02	0.02
Rill 4	0-2	1.44	0.01	0.01
	2-5	1.74	0.01	0.02
Rill 5	0-2	1.28	0.01	0.01
	2-5	1.63	0.01	0.02
Rill 6	0-2	1.54	0.01	0.01
	2-5	1.81	0.01	0.02
Intr. 2	0-2	1.32	0.01	0.01
	2-5	1.72	0.01	0.02
Intr. 9	0-2	1.51	0.01	0.01
	2-5	1.61	0.01	0.02

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.56	0.18	0.27
	2-5	1.78	0.17	0.29
Rill 2	0-2	1.69	0.16	0.27
	2-5	1.57	0.15	0.24
Rill 3	0-2	1.53	0.17	0.27
	2-5	1.49	0.15	0.22
Rill 4	0-2	2.53	0.17	0.42
	2-5	1.68	0.17	0.29
Rill 5	0-2	1.65	0.18	0.30
	2-5	1.70	0.16	0.27
Rill 6	0-2	1.22	0.19	0.23
	2-5	1.60	0.18	0.28
Intr. 2	0-2	1.36	0.15	0.21
	2-5	1.44	0.15	0.22
Intr. 9	0-2	1.17	0.16	0.18
	2-5	1.64	0.16	0.26

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.00
	5-25	0.07
Intr. 5	0-5	0.01
	5-25	0.06
Intr. 6	0-5	0.00
	5-25	0.05

After rain

Plot	Depth cm	MC
Intr. 4	0-20	0.17
	20-40	0.07
Intr. 5	0-20	0.15
	20-40	0.09
Intr. 6	0-15	0.13
	15-40	0.07

SOIL: ACADEMY DATE: JUNE 30, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.18	0.01	0.01
	2-5	1.11	0.01	0.01
Rill 2	0-2	1.46	0.01	0.01
	2-5	1.38	0.01	0.01
Rill 3	0-2	1.32	0.01	0.01
	2-5	1.60	0.01	0.02
Rill 4	0-2	1.46	0.01	0.01
	2-5	1.84	0.01	0.01
Rill 5	0-2	1.05	0.01	0.01
	2-5	1.76	0.01	0.02
Rill 6	0-2	1.31	0.01	0.01
	2-5	1.57	0.01	0.01
Intr. 2	0-2	1.65	0.01	0.02
	2-5	1.45	0.00	0.01
Intr. 9	0-2	1.39	0.01	0.01
	2-5	1.67	0.01	0.02

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.50	0.15	0.23
	2-5	1.65	0.15	0.24
Rill 2	0-2	1.51	0.16	0.24
	2-5	1.71	0.14	0.25
Rill 3	0-2	1.61	0.15	0.25
	2-5	1.86	0.14	0.26
Rill 4	0-2	1.72	0.14	0.24
	2-5	1.93	0.13	0.24
Rill 5	0-2	1.52	0.17	0.26
	2-5	1.77	0.15	0.27
Rill 6	0-2	1.48	0.15	0.22
	2-5	1.69	0.16	0.26
Intr. 2	0-2	1.67	0.13	0.22
	2-5	2.10	0.10	0.22
Intr. 9	0-2	1.47	0.18	0.26
	2-5	1.83	0.17	0.30

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.00
	5-22.5	0.01
Intr. 5	0-5	0.00
	5-22.5	0.01
Intr. 6	0-5	0.00
	5-22.5	0.02

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-14.5	0.25
	14.5-22.5	0.11
Intr. 5	0-10	0.19
	10-20	0.03
Intr. 6	0-10	0.14
	10-17.5	0.12

SOIL: WHITNEY DATE: JUNE 29, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.10	0.01	0.01
	2-5	1.55	0.01	0.01
Rill 2	0-2	1.47	0.01	0.01
	2-5	1.20	0.01	0.01
Rill 3	0-2	1.28	0.01	0.01
	2-5	1.29	0.02	0.02
Rill 4	0-2	1.44	0.01	0.01
	2-5	1.74	0.01	0.02
Rill 5	0-2	1.28	0.01	0.01
	2-5	1.63	0.01	0.02
Rill 6	0-2	1.54	0.01	0.01
	2-5	1.81	0.01	0.02
Intr. 2	0-2	1.32	0.01	0.01
	2-5	1.72	0.01	0.02
Intr. 9	0-2	1.51	0.01	0.01
	2-5	1.61	0.01	0.02

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.56	0.18	0.27
	2-5	1.78	0.17	0.29
Rill 2	0-2	1.69	0.16	0.27
	2-5	1.57	0.15	0.24
Rill 3	0-2	1.53	0.17	0.27
	2-5	1.49	0.15	0.22
Rill 4	0-2	2.53	0.17	0.42
	2-5	1.68	0.17	0.29
Rill 5	0-2	1.65	0.18	0.30
	2-5	1.70	0.16	0.27
Rill 6	0-2	1.22	0.19	0.23
	2-5	1.60	0.18	0.28
Intr. 2	0-2	1.36	0.15	0.21
	2-5	1.44	0.15	0.22
Intr. 9	0-2	1.17	0.16	0.18
	2-5	1.64	0.16	0.26

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.00
	5-25	0.07
Intr. 5	0-5	0.01
	5-25	0.06
Intr. 6	0-5	0.00
	5-25	0.05

After rain

Plot	Depth cm	MC
Intr. 4	0-20	0.17
	20-40	0.07
Intr. 5	0-20	0.15
	20-40	0.09
Intr. 6	0-15	0.13
	15-40	0.07

SOIL: ACADEMY DATE: JUNE 30, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.18	0.01	0.01
	2-5	1.11	0.01	0.01
Rill 2	0-2	1.46	0.01	0.01
	2-5	1.38	0.01	0.01
Rill 3	0-2	1.32	0.01	0.01
	2-5	1.60	0.01	0.02
Rill 4	0-2	1.46	0.01	0.01
	2-5	1.84	0.01	0.01
Rill 5	0-2	1.05	0.01	0.01
	2-5	1.76	0.01	0.02
Rill 6	0-2	1.31	0.01	0.01
	2-5	1.57	0.01	0.01
Intr. 2	0-2	1.65	0.01	0.02
	2-5	1.45	0.00	0.01
Intr. 9	0-2	1.39	0.01	0.01
	2-5	1.67	0.01	0.02

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.50	0.15	0.23
	2-5	1.65	0.15	0.24
Rill 2	0-2	1.51	0.16	0.24
	2-5	1.71	0.14	0.25
Rill 3	0-2	1.61	0.15	0.25
	2-5	1.86	0.14	0.26
Rill 4	0-2	1.72	0.14	0.24
	2-5	1.93	0.13	0.24
Rill 5	0-2	1.52	0.17	0.26
	2-5	1.77	0.15	0.27
Rill 6	0-2	1.48	0.15	0.22
	2-5	1.69	0.16	0.26
Intr. 2	0-2	1.67	0.13	0.22
	2-5	2.10	0.10	0.22
Intr. 9	0-2	1.47	0.18	0.26
	2-5	1.83	0.17	0.30

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.00
	5-22.5	0.01
Intr. 5	0-5	0.00
	5-22.5	0.01
Intr. 6	0-5	0.00
	5-22.5	0.02

After rain

Plot	Depth cm	MC
Intr. 4	0-14.5	0.25
	14.5-22.5	0.11
Intr. 5	0-10	0.19
	10-20	0.03
Intr. 6	0-10	0.14
	10-17.5	0.12

SOIL: LOS BANOS DATE: JULY 1, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.72	0.03	0.02
	2-5	1.09	0.04	0.04
Rill 2	0-2	0.94	0.04	0.04
	2-5	1.19	0.04	0.05
Rill 3	0-2	0.62	0.05	0.03
	2-5	1.27	0.04	0.05
Rill 4	0-2	0.79	0.03	0.03
	2-5	1.13	0.04	0.05
Rill 5	0-2	0.75	0.04	0.03
	2-5	1.02	0.04	0.04
Rill 6	0-2	1.05	0.03	0.03
	2-5	0.94	0.05	0.05
Intr. 2	0-2	0.93	0.04	0.03
	2-5	1.34	0.05	0.06
Intr. 9	0-2	1.16	*Spilled Sample*	
	2-5	1.27	0.04	0.05

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.03	0.44	0.45
	2-5	0.75	0.43	0.32
Rill 2	0-2	1.07	0.41	0.44
	2-5	1.02	0.40	0.40
Rill 3	0-2	1.03	0.40	0.41
	2-5	0.90	0.40	0.36
Rill 4	0-2	0.84	0.43	0.37
	2-5	1.16	0.42	0.48
Rill 5	0-2	0.92	0.44	0.40
	2-5	1.05	0.42	0.44
Rill 6	0-2	1.15	0.42	0.48
	2-5	0.86	0.42	0.36
Intr. 2	0-2	1.16	0.40	0.46
	2-5	1.12	0.42	0.47
Intr. 9	0-2	0.80	0.41	0.33
	2-5	0.89	0.41	0.37

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.03
	5-25	0.10
Intr. 5	0-5	0.04
	5-25	0.08
Intr. 6	0-5	0.03
	5-25	0.11

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-25	0.37
	25-40	0.19
Intr. 5	0-30	0.38
	30-40	0.18
Intr. 6	0-20	0.37
	20-40	0.08

SOIL: PORTNEUF DATE: JULY 6, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	0.83	0.09	0.08
	2-5	0.76	0.12	0.09
Rill 2	0-2	1.05	0.08	0.09
	2-5	0.81	0.11	0.09
Rill 3	0-2	0.93	0.09	0.08
	2-5	1.06	0.11	0.11
Rill 4	0-2	1.24	0.07	0.08
	2-5	0.61	0.08	0.05
Rill 5	0-2	0.90	0.07	0.06
	2-5	1.43	0.05	0.08
Rill 6	0-2	0.87	0.11	0.09
	2-5	0.81	0.11	0.09
Intr. 2	0-2	0.79	0.06	0.05
	2-5	1.13	0.08	0.09
Intr. 9	0-2	0.84	0.07	0.05
	2-5	1.81	0.05	0.09

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.25	0.34	0.42
	2-5	1.60	0.32	0.51
Rill 2	0-2	1.38	0.32	0.44
	2-5	2.15	0.30	0.65
Rill 3	0-2	1.35	0.30	0.41
	2-5	1.07	0.30	0.32
Rill 4	0-2	1.16	0.29	0.33
	2-5	1.28	0.29	0.37
Rill 5	0-2	1.40	0.30	0.41
	2-5	1.39	0.29	0.41
Rill 6	0-2	0.94	0.29	0.28
	2-5	0.82	0.30	0.25
Intr. 2	0-2	1.32	0.33	0.43
	2-5	2.25	0.32	0.71
Intr. 9	0-2	1.22	0.33	0.40
	2-5	1.07	0.32	0.34

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.03
	5-25	0.10
Intr. 5	0-5	0.04
	5-25	0.13
Intr. 6	0-5	0.02
	5-25	0.08

After rain

Plot	Depth cm	MC
Intr. 4	0-17.5	0.38
	17.5-25	0.23
Intr. 5	0-15	0.37
	15-35	0.20
Intr. 6	0-15	0.33
	15-40	0.19

SOIL: NANSENE DATE: JULY 1, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.99	0.03	0.03
	2-5	1.09	0.07	0.07
Rill 2	0-2	1.13	0.03	0.03
	2-5	0.89	0.05	0.05
Rill 3	0-2	0.85	0.05	0.05
	2-5	1.07	0.07	0.08
Rill 4	0-2	0.89	0.06	0.06
	2-5	0.95	0.09	0.08
Rill 5	0-2	0.86	0.05	0.04
	2-5	0.98	0.07	0.06
Rill 6	0-2	0.94	0.08	0.07
	2-5	1.01	0.11	0.11
Intr. 2	0-2	1.00	0.03	0.03
	2-5	1.15	0.04	0.05
Intr. 9	0-2	1.06	0.04	0.04
	2-5	1.04	0.08	0.08

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.56	0.36	0.57
	2-5	2.48	0.35	0.87
Rill 2	0-2	2.26	0.37	0.83
	2-5	1.38	0.35	0.48
Rill 3	0-2	1.62	0.31	0.50
	2-5	2.27	0.28	0.63
Rill 4	0-2	1.17	0.33	0.39
	2-5	1.61	0.29	0.47
Rill 5	0-2	1.50	0.29	0.43
	2-5	1.64	0.27	0.45
Rill 6	0-2	1.14	0.33	0.38
	2-5	0.97	0.30	0.29
Intr. 2	0-2	1.05	0.34	0.36
	2-5	1.20	0.34	0.40
Intr. 9	0-2	1.64	0.37	0.61
	2-5	0.98	0.32	0.31

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.05
	5-25	0.14
Intr. 5	0-5	0.07
	5-25	0.14
Intr. 6	0-5	0.04
	5-25	0.14

After rain

Plot	Depth cm	MC
Intr. 4	0-12.5	0.33
	12.5-35	0.14
Intr. 5	0-15	0.31
	15-40	0.14
Intr. 6	0-15	0.31
	15-40	0.14

SOIL: PALOUSE

DATE: JULY 9, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.07	0.15	0.16
	2-5	0.98	0.18	0.17
Rill 2	0-2	1.04	0.11	0.11
	2-5	1.02	0.14	0.14
Rill 3	0-2	1.00	0.11	0.11
	2-5	0.71	0.15	0.11
Rill 4	0-2	1.10	0.06	0.07
	2-5	0.88	0.11	0.10
Rill 5	0-2	1.04	0.17	0.17
	2-5	0.72	0.19	0.14
Rill 6	0-2	0.99	0.11	0.11
	2-5	1.05	0.16	0.17
Intr. 2	0-2	1.12	0.09	0.10
	2-5	0.87	0.12	0.10
Intr. 9	0-2	1.31	0.18	0.24
	2-5		0.18	

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.20	0.35	0.42
	2-5	1.39	0.35	0.48
Rill 2	0-2	0.96	0.35	0.34
	2-5	0.93	0.38	0.35
Rill 3	0-2	1.36	0.36	0.49
	2-5	1.40	0.37	0.52
Rill 4	0-2	1.24	0.37	0.46
	2-5	1.11	0.39	0.44
Rill 5	0-2	1.20	0.34	0.41
	2-5	1.12	0.37	0.41
Rill 6	0-2	1.19	0.37	0.43
	2-5	1.07	0.36	0.38
Intr. 2	0-2	0.70	0.37	0.26
	2-5	1.12	0.35	0.39
Intr. 9	0-2	0.95	0.42	0.40
	2-5	1.40	0.40	0.56

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.17
	5-25	0.21
Intr. 5	0-5	0.07
	5-25	0.21
Intr. 6	0-5	0.05
	5-25	0.21

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-12.5	0.33
	12.5-35	0.23
Intr. 5	0-12.5	0.36
	12.5-35	0.24
Intr. 6	0-12.5	*Lost Sample*
	12.5-35	0.22

SOIL: ZAHL DATE: JULY 13, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	0.90	0.14	0.12
	2-5	0.92	0.16	0.15
Rill 2	0-2	0.96	0.13	0.13
	2-5	1.57	0.16	0.25
Rill 3	0-2	1.16	0.13	0.15
	2-5	0.74	0.15	0.11
Rill 4	0-2	0.90	0.14	0.12
	2-5	1.01	0.15	0.15
Rill 5	0-2	1.07	0.12	0.13
	2-5	0.86	0.14	0.12
Rill 6	0-2	0.98	0.14	0.14
	2-5	1.07	0.16	0.17
Intr. 2	0-2	1.54	0.08	0.12
	2-5	1.67	0.07	0.12
Intr. 9	0-2	0.94	0.11	0.11
	2-5	1.08	0.14	0.15

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.49	0.28	0.41
	2-5	1.40	0.30	0.42
Rill 2	0-2	1.13	0.27	0.31
	2-5	1.00	0.28	0.28
Rill 3	0-2	1.33	0.30	0.40
	2-5	1.33	0.30	0.39
Rill 4	0-2	1.31	0.21	0.27
	2-5	1.30	0.31	0.40
Rill 5	0-2	1.20	0.25	0.30
	2-5	0.86	0.26	0.23
Rill 6	0-2	1.23	0.31	0.38
	2-5	1.97	0.24	0.47
Intr. 2	0-2	1.16	0.31	0.36
	2-5	1.49	0.30	0.45
Intr. 9	0-2	0.99	0.36	0.36
	2-5	1.59	0.30	0.48

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.13
	5-25	0.19
Intr. 5	0-5	0.14
	5-25	0.17
Intr. 6	0-5	0.12
	5-25	0.19

After rain

Plot	Depth cm	MC
Intr. 4	0-15	0.36
	15-40	0.23
Intr. 5	0-17.5	0.32
	17.5-40	0.22
Intr. 6	0-17.5	0.30
	17.5-40	0.23

SOIL: PIERRE

DATE: JULY 31, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.83	0.06	0.05
	2-5	1.09	0.09	0.10
Rill 2	0-2	0.89	0.08	0.07
	2-5	0.87	0.09	0.08
Rill 3	0-2	0.84	0.06	0.05
	2-5	1.23	0.07	0.08
Rill 4	0-2	0.90	0.09	0.08
	2-5	0.85	0.09	0.08
Rill 5	0-2	0.79	0.08	0.07
	2-5	1.01	0.13	0.13
Rill 6	0-2	0.69	0.13	0.09
	2-5	1.01	0.13	0.13
Intr. 2	0-2	1.16	0.08	0.10
	2-5	1.06	0.10	0.11
Intr. 9	0-2	0.95	0.10	0.09
	2-5	0.99	0.10	0.10

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.92	0.45	0.41
	2-5	0.90	0.50	0.45
Rill 2	0-2	0.92	0.44	0.41
	2-5	0.82	0.43	0.36
Rill 3	0-2	1.07	0.45	0.48
	2-5	1.09	0.41	0.44
Rill 4	0-2	1.04	0.47	0.49
	2-5	0.98	0.45	0.44
Rill 5	0-2	0.95	0.44	0.41
	2-5	1.11	0.45	0.50
Rill 6	0-2	1.30	0.55	0.71
	2-5	0.93	0.49	0.45
Intr. 2	0-2	0.95	0.43	0.41
	2-5	0.97	0.41	0.40
Intr. 9	0-2	0.90	0.43	0.38
	2-5	0.94	0.42	0.40

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.17
	5-25	0.25
Intr. 5	0-5	0.13
	5-25	0.28
Intr. 6	0-5	0.10
	5-25	0.27

After rain

Plot	Depth cm	MC
Intr. 4	0-12.5	0.46
	12.5-30	0.32
Intr. 5	0-15	0.40
	15-30	0.27
Intr. 6	0-10	0.39
	10-30	0.30

SOIL: WILLIAMS DATE: AUGUST 3, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	4.25	0.14	0.61
	2-5	0.29	0.21	0.06
Rill 2	0-2	0.77	0.18	0.14
	2-5	0.68	0.17	0.12
Rill 3	0-2	0.76	0.15	0.11
	2-5	0.64	0.17	0.11
Rill 4	0-2	0.86	0.15	0.13
	2-5	0.82	0.19	0.15
Rill 5	0-2	0.52	0.18	0.09
	2-5	0.94	0.18	0.17
Rill 6	0-2	1.14	0.17	0.20
	2-5	0.43	0.20	0.08
Intr. 9	0-2	0.90	0.22	0.20
	2-5	0.92	0.23	0.21
Intr. 2	0-2	0.98	0.22	0.22
	2-5	0.79	0.22	0.17

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.17	0.34	0.39
	2-5	1.42	0.36	0.51
Rill 2	0-2	1.08	0.34	0.36
	2-5	1.19	0.32	0.38
Rill 3	0-2	1.48	0.31	0.45
	2-5	1.75	0.34	0.60
Rill 4	0-2	1.22	0.28	0.34
	2-5	1.87	0.36	0.67
Rill 5	0-2	0.77	0.34	0.27
	2-5	1.07	0.33	0.35
Rill 6	0-2	1.16	0.27	0.32
	2-5	1.14	0.30	0.34
Intr. 9	0-2	1.01	0.29	0.30
	2-5	0.74	0.32	0.24
Intr. 2	0-2	1.04	0.33	0.35
	2-5	1.19	0.36	0.43

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	*Lost Sample*
	5-25	
Intr. 5	0-5	0.20
	5-25	0.18
Intr. 6	0-5	0.16
	5-25	0.18

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-17.5	0.34
	17.5-30	0.24
Intr. 5	0-22.5	0.28
	22.5-30	0.22
Intr. 6	0-20	0.29
	20-30	0.19

SOIL:BARNES - ND DATE: AUGUST 4, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.98	0.12	0.12
	2-5	1.00	0.14	0.14
Rill 2	0-2	0.77	0.16	0.12
	2-5	0.90	0.15	0.14
Rill 3	0-2	0.89	0.12	0.10
	2-5	0.79	0.14	0.11
Rill 4	0-2	1.04	0.14	0.14
	2-5	0.81	0.15	0.12
Rill 5	0-2	0.93	0.12	0.11
	2-5	0.98	0.12	0.12
Rill 6	0-2	2.95	0.12	0.35
	2-5	1.77	0.12	0.21
Intr. 2	0-2	0.94	0.14	0.13
	2-5	0.88	0.18	0.16
Intr. 9	0-2	0.96	0.13	0.13
	2-5	0.96	0.18	0.17

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.37	0.38	0.14
	2-5	1.94	0.38	0.74
Rill 2	0-2	1.27	0.31	0.39
	2-5	1.45	0.33	0.48
Rill 3	0-2	1.24	0.31	0.38
	2-5	1.45	0.34	0.49
Rill 4	0-2	0.98	0.34	0.33
	2-5	3.57	0.35	1.26
Rill 5	0-2	1.37	0.31	0.43
	2-5	1.06	0.34	0.36
Rill 6	0-2	1.11	0.34	0.37
	2-5	1.42	0.32	0.45
Intr. 2	0-2	1.44	0.30	0.44
	2-5	0.83	0.32	0.27
Intr. 9	0-2	0.95	0.34	0.32
	2-5	1.28	0.35	0.45

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.15
	5-25	0.18
Intr. 5	0-5	0.11
	5-25	0.20
Intr. 6	0-5	0.19
	5-25	0.20

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-10	0.35
	10-30	0.26
Intr. 5	0-17.5	0.36
	17.5-3	0.25
Intr. 6	0-14.5	0.34
	14.5-3	0.23

SOIL: SVERDRUP DATE: AUGUST 6, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.27	0.08	0.10
	2-5	0.91	0.08	0.08
Rill 2	0-2	1.72	0.09	0.16
	2-5	1.05	0.10	0.10
Rill 3	0-2	1.18	0.08	0.09
	2-5	1.61	0.08	0.14
Rill 4	0-2	1.17	0.07	0.08
	2-5	1.24	0.09	0.11
Rill 5	0-2	1.23	0.07	0.08
	2-5	1.29	0.08	0.11
Rill 6	0-2	1.12	0.06	0.07
	2-5	1.45	0.08	0.11
Intr. 2	0-2	1.14	0.06	0.07
	2-5	1.25	0.07	0.09
Intr. 9	0-2	1.18	0.07	0.09
	2-5	1.37	0.04	0.06

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.18	0.21	0.25
	2-5	1.90	0.22	0.42
Rill 2	0-2	1.36	0.23	0.31
	2-5	1.62	0.22	0.36
Rill 3	0-2	1.24	0.19	0.24
	2-5	1.64	0.21	0.34
Rill 4	0-2	1.80	0.19	0.35
	2-5	1.51	0.21	0.32
Rill 5	0-2	1.46	0.18	0.26
	2-5	0.86	1.21	1.05
Rill 6	0-2	1.32	0.18	0.24
	2-5	1.77	0.19	0.33
Intr. 2	0-2	1.69	0.19	0.31
	2-5	1.54	0.19	0.29
Intr. 9	0-2	1.38	0.24	0.33
	2-5	1.60	0.23	0.36

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.07
	5-25	0.12
Intr. 5	0-5	0.11
	5-25	0.13
Intr. 6	0-5	0.09
	5-25	0.12

After rain

Plot	Depth cm	MC
Intr. 4	0-30	0.22
Intr. 5	0-19.5	0.22
	19.5-30	0.16
Intr. 6	0-16.75	0.22
	16.75-30	0.14

SOIL: BARNES - MN   DATE: AUGUST 7, 1987

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.10	0.16	0.17
	2-5	0.64	0.16	0.10
Rill 2	0-2	0.85	0.08	0.07
	2-5	1.06	0.09	0.09
Rill 3	0-2	1.18	0.12	0.15
	2-5	0.92	0.15	0.14
Rill 4	0-2	1.06	0.13	0.14
	2-5	1.02	0.13	0.14
Rill 5	0-2	0.90	0.13	0.12
	2-5	0.80	0.13	0.10
Rill 6	0-2	1.00	0.06	0.06
	2-5	1.28	0.08	0.11
Intr. 2	0-2	1.20	0.15	0.18
	2-5	1.02	0.16	0.16
Intr. 9	0-2	1.04	0.07	0.07
	2-5	1.09	0.10	0.11

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	2.85	0.23	0.65
	2-5	0.68	0.28	0.19
Rill 2	0-2	2.48	0.25	0.63
	2-5	0.51	0.29	0.15
Rill 3	0-2	1.39	0.26	0.36
	2-5	1.43	0.27	0.39
Rill 4	0-2	1.11	0.26	0.29
	2-5	1.19	0.27	0.32
Rill 5	0-2	1.09	0.24	0.26
	2-5	1.07	0.25	0.27
Rill 6	0-2	1.05	0.25	0.26
	2-5	1.29	0.25	0.32
Intr. 2	0-2	0.84	0.25	0.21
	2-5	2.39	0.27	0.64
Intr. 9	0-2	1.34	0.31	0.42
	2-5	1.26	0.28	0.35

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.11
	5-25	0.15
Intr. 5	0-5	0.09
	5-25	0.15
Intr. 6	0-5	0.08
	5-25	0.16

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-20	0.31
	20-30	0.21
Intr. 5	0-15	0.26
	15-30	0.14
Intr. 6	0-16.75	0.30
	16.75-30	0.21

SOIL: MEXICO

DATE: JUNE 1, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.03	-0.02	-0.02 * *Lab error*
	2-5	0.91	0.17	0.16
Rill 2	0-2	0.92	0.15	0.14
	2-5	0.89	0.17	0.15
Rill 3	0-2	1.05	0.17	0.18
	2-5	0.87	0.16	0.14
Rill 4	0-2	0.88	0.15	0.13
	2-5	1.04	0.18	0.19
Rill 5	0-2	0.91	0.15	0.13
	2-5	1.00	0.19	0.19
Rill 6	0-2	0.86	0.16	0.14
	2-5	0.98	0.17	0.17
Intr. 2	0-2	0.92	0.11	0.10
	2-5	0.88	0.18	0.16
Intr. 5	0-2	0.99	0.19	0.19
	2-5	1.17	0.16	0.19

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.33	0.39	0.52
	2-5	1.51	0.41	0.63
Rill 2	0-2	1.17	0.39	0.46
	2-5	1.77	0.39	0.69
Rill 3	0-2	1.31	0.37	0.48
	2-5	1.41	0.38	0.54
Rill 4	0-2	1.64	0.36	0.59
	2-5	1.03	0.39	0.40
Rill 5	0-2	1.17	0.36	0.43
	2-5	1.90	0.36	0.68
Rill 6	0-2	1.29	0.35	0.46
	2-5	1.20	0.35	0.42
Intr. 2	0-2	1.14	0.37	0.42
	2-5	1.31	0.37	0.49
Intr. 5	0-2	1.24	0.43	0.53
	2-5	1.23	0.39	0.48

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.12
	5-15	0.24
Intr. 6	0-5	0.22
	5-15	0.23

After rain

Plot	Depth	MC
	cm	
Intr. 9	0-10	0.40
	10-15	0.27
Intr. 10	0-8	0.37
	8-15	0.26

SOIL: GRENADA DATE: JUNE 3, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.09	0.07	0.08
	2-5	1.33	0.09	0.12
Rill 2	0-2	0.79	0.05	0.04
	2-5	1.50	0.06	0.09
Rill 3	0-2	1.16	0.07	0.08
	2-5	1.28	0.12	0.15
Rill 4	0-2	1.08	0.10	0.11
	2-5	1.25	0.13	0.16
Rill 5	0-2	1.04	0.06	0.06
	2-5	1.28	0.07	0.09
Rill 6	0-2	1.02	0.06	0.06
	2-5	1.20	0.10	0.12
Intr. 2	0-2	0.70	0.05	0.03
	2-5	2.40	0.07	0.16
Intr. 5	0-2	1.09	0.04	0.05
	2-5	1.42	0.05	0.08

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.15	0.41	0.47
	2-5	1.67	0.39	0.65
Rill 2	0-2	1.22	0.38	0.47
	2-5	1.21	0.42	0.50
Rill 3	0-2	1.19	0.40	0.48
	2-5	1.94	0.34	0.67
Rill 4	0-2	1.14	0.41	0.47
	2-5	1.27	0.42	0.54
Rill 5	0-2	1.20	0.44	0.53
	2-5	1.46	0.32	0.47
Rill 6	0-2	1.06	0.36	0.38
	2-5	1.60	0.32	0.51
Intr. 2	0-2	1.26	0.32	0.40
	2-5	1.78	0.31	0.55
Intr. 5	0-2	2.23	0.42	0.95
	2-5	1.37	0.33	0.45

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-5	0.16
	5-15	0.24
Intr. 6	0-5	0.04
	5-15	0.22

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-8	0.26
	8-20	0.23
Intr. 6	0-15	0.28
	15-30	0.24

SOIL: TIFTON DATE: JUNE 6, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.38	0.01	0.02
	2-5	1.46	0.02	0.03
Rill 2	0-2	1.49	0.02	0.04
	2-5	1.45	0.02	0.04
Rill 3	0-2	1.35	0.02	0.03
	2-5	1.50	0.02	0.03
Rill 4	0-2	1.47	0.02	0.03
	2-5	1.64	0.02	0.04
Rill 5	0-2	1.09	0.01	0.01
	2-5	1.49	0.01	0.01
Rill 6	0-2	1.41	0.01	0.02
	2-5	1.40	0.01	0.02
Intr. 2	0-2	1.62	0.01	0.02
	2-5	1.44	0.01	0.02
Intr. 5	0-2	1.00	0.01	0.01
	2-5	3.10	0.01	0.03

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.84	0.18	0.34
	2-5	2.15	0.17	0.36
Rill 2	0-2	1.63	0.16	0.26
	2-5	2.33	0.14	0.33
Rill 3	0-2	1.79	0.17	0.30
	2-5	1.62	0.16	0.25
Rill 4	0-2	1.67	0.17	0.28
	2-5	1.71	0.15	0.26
Rill 5	0-2	1.71	0.17	0.28
	2-5	1.33	0.14	0.18
Rill 6	0-2	1.92	0.18	0.34
	2-5	1.37	0.16	0.21
Intr. 2	0-2	1.96	0.13	0.25
	2-5	1.01	0.13	0.13
Intr. 5	0-2	3.81	0.16	0.60
	2-5	0.92	0.12	0 11

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.01
	5-25	0.04
Intr. 6	0-5	0.01
	5-25	0.07

After rain

Plot	Depth cm	MC
Intr. 4	0-20	0.17
	20-30	0.11
Intr. 6	0-15	0.16
	15-30	0.12

SOIL: BONIFAY DATE: JUNE 7, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.36	0.07	0.09
	2-5	1.19	0.06	0.07
Rill 2	0-2	1.13	0.07	0.08
	2-5	1.14	0.08	0.09
Rill 3	0-2	1.58	0.08	0.13
	2-5	1.08	0.08	0.09
Rill 4	0-2	1.13	0.08	0.09
	2-5	1.21	0.08	0.10
Rill 5	0-2	1.25	0.08	0.10
	2-5	1.38	0.09	0.12
Rill 6	0-2	1.26	0.09	0.12
	2-5	1.15	0.08	0.09
Intr. 2	0-2	1.09	0.08	0.09
	2-5	1.42	0.08	0.11
Intr. 5	0-2	1.22	0.08	0.09
	2-5	1.22	0.08	0.10

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.93	0.18	0.35
	2-5	1.35	0.15	0.20
Rill 2	0-2	2.49	0.16	0.41
	2-5	1.39	0.13	0.17
Rill 3	0-2	1.10	0.20	0.22
	2-5	1.70	0.11	0.19
Rill 4	0-2	1.78	0.13	0.22
	2-5	1.58	0.12	0.19
Rill 5	0-2	1.82	0.14	0.26
	2-5	1.98	0.11	0.22
Rill 6	0-2	1.88	0.12	0.22
	2-5	1.42	0.11	0.16
Intr. 2	0-2	1.49	0.11	0.16
	2-5	1.27	0.10	0.13
Intr. 5	0-2	1.38	0.16	0.21
	2-5	2.01	0.15	0.30

SOIL MOISTURE ANALYSIS

Before rain *

Plot	Depth cm	MC
Intr. 4	0-15	0.05
	15-25	0.05
Intr. 6	0-15	0.08
	15-20	0.04

After rain

Plot	Depth cm	MC
Intr. 4	0-25	0.17
	25-35	0.15
Intr. 6	0-20	0.16
	20-35	0.11

* *It rained the night before this sample was taken.*

SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.13	0.01	0.01
	2-5	1.07	0.02	0.02
Rill 2	0-2	1.23	0.03	0.04
	2-5	1.20	0.02	0.02
Rill 3	0-2	0.98	0.02	0.02
	2-5	1.36	0.03	0.05
Rill 4	0-2	1.07	0.01	0.02
	2-5	1.00	0.01	0.01
Rill 5	0-2	0.86	0.04	0.03
	2-5	1.21	0.03	0.04
Rill 6	0-2	1.29	0.02	0.02
	2-5	1.13	0.03	0.03
Intr. 2	0-2	1.13	0.02	0.02
	2-5	1.61	0.02	0.03
Intr. 5	0-2	1.23	0.01	0.01
	2-5	1.27	0.01	0.02

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.14	0.41	0.47
	2-5	1.36	0.41	0.56
Rill 2	0-2	1.35	0.40	0.53
	2-5	1.27	0.42	0.53
Rill 3	0-2	1.19	0.45	0.53
	2-5	1.85	0.36	0.66
Rill 4	0-2	1.26	0.34	0.43
	2-5	1.32	0.39	0.52
Rill 5	0-2	1.33	0.32	0.42
	2-5	1.78	0.28	0.49
Rill 6	0-2	1.33	0.35	0.46
	2-5	1.33	0.29	0.39
Intr. 2	0-2	1.54	0.30	0.46
	2-5	1.46	0.29	0.42
Intr. 5	0-2	1.40	0.27	0.38
	2-5	1.16	0.26	0.31

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.04
	5-15	0.21
Intr. 6	0-5	0.02
	5-15	0.21

After rain

Plot	Depth cm	MC
Intr. 4	0-10	0.29
	10-35	0.20
Intr. 6	0-8	0.24
	8-35	0.20

SOIL: HIWASSEE DATE: JUNE 10, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.59	0.22	0.34
	2-5	1.64	0.21	0.34
Rill 2	0-2	1.62	0.22	0.36
	2-5	1.52	0.19	0.28
Rill 3	0-2	1.66	0.21	0.34
	2-5	1.60	0.20	0.31
Rill 4	0-2	1.54	0.17	0.27
	2-5	1.69	0.13	0.21
Rill 5	0-2	1.55	0.17	0.26
	2-5	1.53	0.12	0.19
Rill 6	0-2	1.45	0.20	0.30
	2-5	1.78	0.20	0.35
Intr. 2	0-2	1.28	0.01	0.02
	2-5	1.49	0.03	0.04
Intr. 5	0-2	1.35	0.01	0.01
	2-5	1.00	0.01	0.01

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.59	0.22	0.34
	2-5	1.43	0.18	0.25
Rill 2	0-2	1.62	0.22	0.36
	2-5	1.52	0.19	0.28
Rill 3	0-2	1.66	0.21	0.34
	2-5	1.60	0.20	0.31
Rill 4	0-2	1.54	0.17	0.27
	2-5	1.69	0.13	0.21
Rill 5	0-2	1.55	0.17	0.26
	2-5	1.53	0.12	0.19
Rill 6	0-2	1.45	0.20	0.30
	2-5	1.78	0.20	0.35
Intr. 2	0-2	1.28	0.20	0.26
	2-5	1.46	0.21	0.30
Intr. 5	0-2	1.50	0.19	0.28
	2-5	1.75	0.18	0.31

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.01
	15-30	0.08
Intr. 6	0-15	0.01
	15-30	0.08

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-13	0.22
	13-25	0.15
Intr. 6	0-6	0.16
	6-25	0.10

SOIL: GASTON DATE: JUNE 13, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.17	0.13	0.16
	2-5	0.97	0.13	0.13
Rill 2	0-2	1.02	0.13	0.13
	2-5	0.51	0.16	0.08
Rill 3	0-2	0.52	1.19	0.62
	2-5	1.00	0.14	0.14
Rill 4	0-2	0.96	0.13	0.12
	2-5	1.09	0.14	0.16
Rill 5	0-2	0.96	0.14	0.13
	2-5	0.98	0.16	0.16
Rill 6	0-2	0.84	0.15	0.13
	2-5	1.06	0.15	0.16
Intr. 2	0-2	0.90	0.15	0.13
	2-5	1.20	0.18	0.21
Intr. 5	0-2	0.92	0.15	0.14
	2-5	1.11	0.15	0.17

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	Vol.
Rill 1	0-2	1.28	0.35	0.45
	2-5	1.45	0.45	0.65
Rill 2	0-2	1.39	0.39	0.53
	2-5	1.23	0.42	0.52
Rill 3	0-2	1.28	0.36	0.45
	2-5	1.26	0.37	0.47
Rill 4	0-2	1.10	0.35	0.39
	2-5	1.46	0.41	0.59
Rill 5	0-2	1.27	0.33	0.42
	2-5	1.33	0.38	0.51
Rill 6	0-2	1.21	0.34	0.42
	2-5	1.45	0.40	0.58
Intr. 2	0-2	1.22	0.32	0.39
	2-5	0.97	0.36	0.35
Intr. 5	0-2	1.13	0.36	0.41
	2-5	0.99	0.38	0.38

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-15	0.09
	15-30	0.25
Intr. 6	0-15	0.13
	15-30	0.27

After rain

Plot	Depth cm	MC
Intr. 4	0-11.5	0.40
	11.5-30	0.34
Intr. 6	0-9	0.35
	9-30	0.31

SOIL: OPEQUON DATE: JUNE 15, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.04	0.13	0.14
	2-5	0.91	0.13	0.12
Rill 2	0-2	0.86	0.19	0.16
	2-5	1.08	0.22	0.24
Rill 3	0-2	1.41	0.13	0.19
	2-5	1.11	0.15	0.17
Rill 4	0-2	1.01	0.17	0.17
	2-5	0.92	0.16	0.15
Rill 5	0-2	0.91	0.13	0.12
	2-5	0.98	0.12	0.12
Rill 6	0-2	0.91	0.14	0.13
	2-5	0.97	0.15	0.15
Intr. 2	0-2	1.31	0.13	0.17
	2-5	1.02	0.15	0.15
Intr. 5	0-2	0.81	0.17	0.13
	2-5	1.02	0.17	0.18

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.45	0.39	0.56
	2-5	0.92	0.42	0.38
Rill 2	0-2	1.40	0.38	0.53
	2-5	1.43	0.35	0.50
Rill 3	0-2	1.07	0.38	0.41
	2-5	1.45	0.36	0.53
Rill 4	0-2	1.06	0.34	0.36
	2-5	1.32	0.33	0.44
Rill 5	0-2	1.50	0.36	0.55
	2-5	1.63	0.37	0.60
Rill 6	0-2	1.48	0.34	0.50
	2-5	1.51	0.32	0.49
Intr. 2	0-2	1.30	0.35	0.45
	2-5	1.42	0.34	0.49
Intr. 5	0-2	1.16	0.43	0.50
	2-5	1.35	0.33	0.45

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.12
	15-30	0.29
Intr. 6	0-15	0.11
	15-30	0.26

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-6.5	0.38
	6.5-30	0.36
Intr. 6	0-4.5	0.32
	4.5-30	0.21

SOIL: FREDERICK DATE: JUNE 16, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.04	0.12	0.12
	2-5	1.24	0.14	0.18
Rill 2	0-2	1.15	0.13	0.15
	2-5	1.00	0.15	0.15
Rill 3	0-2	1.14	0.11	0.12
	2-5	1.11	0.12	0.13
Rill 4	0-2	0.92	0.15	0.14
	2-5	1.42	0.16	0.22
Rill 5	0-2	1.02	0.16	0.17
	2-5	1.09	0.16	0.18
Rill 6	0-2	1.16	0.12	0.14
	2-5	1.00	0.17	0.17
Intr. 2	0-2	0.99	0.11	0.11
	2-5	1.03	0.09	0.09
Intr. 5	0-2	1.09	0.12	0.13
	2-5	1.03	0.13	0.14

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.40	0.29	0.40
	2-5	1.57	0.31	0.48
Rill 2	0-2	1.21	0.29	0.35
	2-5	2.18	0.28	0.61
Rill 3	0-2	1.38	0.26	0.36
	2-5	1.87	0.30	0.56
Rill 4	0-2	1.36	0.31	0.42
	2-5	1.30	0.30	0.39
Rill 5	0-2	1.02	0.30	0.30
	2-5	2.08	0.26	0.54
Rill 6	0-2	1.27	0.33	0.42
	2-5	1.55	0.33	0.51
Intr. 2	0-2	1.11	0.29	0.32
	2-5	1.46	0.27	0.40
Intr. 5	0-2	1.29	0.36	0.47
	2-5	0.90	0.32	0.28

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.14
	15-30	0.19
Intr. 6	0-15	0.12
	15-30	0.15

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-6	0.31
	6-15	0.21
Intr. 6	0-5	0.32
	5-15	0.31

SOIL: MANOR DATE: JUNE 17, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.04	0.08	0.08
	2-5	0.96	0.16	0.15
Rill 2	0-2	1.33	0.11	0.15
	2-5	0.82	0.19	0.16
Rill 3	0-2	1.22	0.14	0.16
	2-5	1.06	0.20	0.21
Rill 4	0-2	0.91	0.10	0.09
	2-5	1.07	0.11	0.12
Rill 5	0-2	1.05	0.06	0.07
	2-5	0.97	0.08	0.08
Rill 6	0-2	1.02	0.07	0.07
	2-5	0.86	0.07	0.06
Intr. 2	0-2	1.06	0.10	0.10
	2-5	1.25	0.18	0.23
Intr. 5	0-2	1.04	0.11	0.11
	2-5	1.31	0.13	0.17

After rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.39	0.35	0.49
	2-5	0.78	0.34	0.26
Rill 2	0-2	1.57	0.39	0.62
	2-5	1.79	0.44	0.78
Rill 3	0-2	1.31	0.38	0.50
	2-5	1.77	0.40	0.72
Rill 4	0-2	1.27	0.35	0.44
	2-5	1.59	0.29	0.46
Rill 5	0-2	1.22	0.32	0.39
	2-5	1.47	0.33	0.48
Rill 6	0-2	1.76	0.31	0.54
	2-5	1.36	0.32	0.44
Intr. 2	0-2	1.17	0.31	0.37
	2-5	1.37	0.04	0.05
Intr. 5	0-2	1.35	0.37	0.49
	2-5	1.39	0.34	0.47

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-15	0.14
	15-30	0.23
Intr. 6	0-15	0.09
	15-30	0.23

After rain

Plot	Depth cm	MC
Intr. 4	0-6.5	0.37
	6.5-30	0.26
Intr. 6	0-6	0.33
	6-30	0.26

SOIL: CARIBOU DATE: JUNE 29, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth cm	BD g/cc	Moist.Content Mass	 Vol.
Rill 1	0-2	1.13	0.09	0.10
	2-5	1.14	0.11	0.12
Rill 2	0-2	1.13	0.06	0.07
	2-5	1.10	0.07	0.08
Rill 3	0-2	1.01	0.07	0.07
	2-5	1.14	0.07	0.08
Rill 4	0-2	0.96	0.08	0.08
	2-5	0.93	0.11	0.11
Rill 5	0-2	1.15	0.07	0.08
	2-5	0.95	0.07	0.07
Rill 6	0-2	1.14	0.06	0.06
	2-5	1.12	0.06	0.07
Intr. 2	0-2	1.22	0.05	0.06
	2-5	1.10	0.06	0.07
Intr. 5	0-2	1.02	0.05	0.05
	2-5	1.05	0.07	0.07

After rain

No bulk density samples were taken after rain because of high surface stone content.

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-5	0.04
	5-10	0.16
Intr. 6	0-5	0.09
	5-10	0.14

After rain

Plot	Depth cm	MC
Intr. 4	0-15	0.29
	15-20	0.23
Intr. 6	0-8	0.23
	8-15	0.15

SOIL: COLLAMER DATE: JULY 2, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.16	0.12	0.14
	2-5	0.99	0.14	0.13
Rill 2	0-2	1.07	0.13	0.14
	2-5	0.98	0.14	0.14
Rill 3	0-2	1.15	0.15	0.17
	2-5	1.13	0.15	0.17
Rill 4	0-2	1.12	0.15	0.17
	2-5	1.04	0.16	0.16
Rill 5	0-2	1.07	0.13	0.14
	2-5	1.18	0.14	0.16
Rill 6	0-2	1.09	0.15	0.16
	2-5	1.03	0.15	0.15
Intr. 2	0-2	1.03	0.16	0.16
	2-5	1.17	0.15	0.17
Intr. 5	0-2	0.97	0.13	0.13
	2-5	1.05	0.15	0.15

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.52	0.37	0.56
	2-5	1.65	0.35	0.58
Rill 2	0-2	1.31	0.40	0.52
	2-5	1.55	0.34	0.53
Rill 3	0-2	1.44	0.33	0.47
	2-5	1.75	0.32	0.56
Rill 4	0-2	1.34	0.36	0.48
	2-5	1.59	0.35	0.55
Rill 5	0-2	1.44	0.35	0.50
	2-5	1.35	0.35	0.48
Rill 6	0-2	1.34	0.39	0.52
	2-5	1.21	0.38	0.45
Intr. 2	0-2	1.40	0.34	0.48
	2-5	1.28	0.33	0.42
Intr. 5	0-2	1.16	0.39	0.45
	2-5	1.47	0.37	0.54

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth cm	MC
Intr. 4	0-15	0.13
	15-30	0.22
Intr. 6	0-15	0.14
	15-30	0.19

After rain

Plot	Depth cm	MC
Intr. 4	0-7.5	0.41
	7.5-25	0.22
Intr. 6	0-6	0.32
	6-25	0.19

SOIL: MIAMIAN

DATE: JULY 5, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.23	0.04	0.06
	2-5	1.72	0.05	0.08
Rill 2	0-2	1.20	0.03	0.03
	2-5	1.30	0.05	0.07
Rill 3	0-2	1.28	0.05	0.07
	2-5	1.09	0.08	0.09
Rill 4	0-2	1.31	0.04	0.05
	2-5	1.21	0.05	0.06
Rill 5	0-2	1.19	0.05	0.06
	2-5	1.30	0.06	0.08
Rill 6	0-2	1.14	0.03	0.04
	2-5	1.22	0.06	0.07
Intr. 2	0-2	1.05	0.05	0.05
	2-5	1.06	0.06	0.06
Intr. 5	0-2	1.18	0.06	0.07
	2-5	1.17	0.07	0.08

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.82	0.38	0.69
	2-5	1.13	0.45	0.51
Rill 2	0-2	1.10	0.42	0.47
	2-5	1.44	0.44	0.64
Rill 3	0-2	1.72	0.33	0.57
	2-5	1.66	0.33	0.55
Rill 4	0-2	1.83	0.35	0.63
	2-5	1.11	0.28	0.31
Rill 5	0-2	1.56	0.34	0.53
	2-5	1.44	0.29	0.41
Rill 6	0-2	1.42	0.35	0.50
	2-5	1.38	0.36	0.50
Intr. 2	0-2	1.16	0.24	0.28
	2-5	1.17	0.27	0.32
Intr. 5	0-2	1.14	0.36	0.41
	2-5	0.83	0.37	0.30

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.03
	15-30	0.18
Intr. 6	0-15	0.02
	15-30	0.18

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-11.5	0.34
	11.5-30	0.22
Intr. 6	0-8	0.30
	8-30	0.21

SOIL: LEWISBURG DATE: JULY 7, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.00	0.01	0.01
	2-5	1.09	0.03	0.03
Rill 2	0-2	1.10	0.02	0.02
	2-5	1.37	0.04	0.05
Rill 3	0-2	1.03	0.01	0.01
	2-5	1.07	0.04	0.05
Rill 4	0-2	1.12	0.03	0.04
	2-5	1.03	0.05	0.05
Rill 5	0-2	1.21	0.02	0.02
	2-5	1.16	0.03	0.04
Rill 6	0-2			
	2-5	1.22	0.05	0.06
Intr. 2	0-2	1.10	0.01	0.01
	2-5	1.34	0.02	0.03
Intr. 5	0-2	1.11	0.03	0.03
	2-5	1.20	0.05	0.06

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	0.81	1.05	0.85
	2-5	1.64	0.27	0.44
Rill 2	0-2	1.52	0.30	0.45
	2-5	1.33	0.28	0.37
Rill 3	0-2	1.41	0.27	0.39
	2-5	1.41	0.28	0.39
Rill 4	0-2	1.32	0.30	0.39
	2-5	1.73	0.27	0.48
Rill 5	0-2	1.11	0.26	0.29
	2-5	1.26	0.25	0.32
Rill 6	0-2	1.39	0.29	0.40
	2-5	1.33	0.28	0.38
Intr. 2	0-2	1.01	0.25	0.25
	2-5	1.15	0.25	0.28
Intr. 5	0-2	1.21	0.28	0.34
	2-5	1.31	0.27	0.35

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.17
	15-30	0.04
Intr. 6	0-15	0.05
	15-30	0.17

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-12	0.29
	12-30	0.18
Intr. 6	0-5	0.24
	5-30	0.15

SOIL: MIAMI JULY 8, 1988

BULK DENSITY ANALYSIS

Before rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.11	0.05	0.06
	2-5	1.04	0.09	0.09
Rill 2	0-2	0.96	0.05	0.05
	2-5	1.14	0.06	0.07
Rill 3	0-2	1.12	0.04	0.05
	2-5	1.08	0.05	0.06
Rill 4	0-2	1.27	0.05	0.06
	2-5	1.10	0.08	0.09
Rill 5	0-2	1.11	0.03	0.04
	2-5	1.07	0.07	0.07
Rill 6	0-2	1.07	0.02	0.02
	2-5	1.07	0.04	0.04
Intr. 2	0-2	1.20	0.06	0.07
	2-5	1.13	0.09	0.10
Intr. 5	0-2	1.07	0.05	0.06
	2-5	1.06	0.13	0.14

After rain

Plot	Depth	BD	Moist.Content	
	cm	g/cc	Mass	Vol.
Rill 1	0-2	1.51	0.35	0.52
	2-5	1.27	0.33	0.41
Rill 2	0-2	1.31	0.34	0.45
	2-5	1.51	0.30	0.45
Rill 3	0-2	0.81	0.39	0.31
	2-5	1.52	0.35	0.53
Rill 4	0-2	1.27	0.37	0.47
	2-5	1.39	0.34	0.48
Rill 5	0-2	1.52	0.33	0.50
	2-5	1.33	0.32	0.42
Rill 6	0-2	1.64	0.31	0.51
	2-5	1.25	0.29	0.37
Intr. 2	0-2	1.13	0.32	0.36
	2-5	1.35	0.31	0.42
Intr. 5	0-2	1.28	0.33	0.43
	2-5	1.34	0.32	0.43

SOIL MOISTURE ANALYSIS

Before rain

Plot	Depth	MC
	cm	
Intr. 4	0-15	0.02
	15-30	0.18
Intr. 6	0-15	0.03
	15-30	0.18

After rain

Plot	Depth	MC
	cm	
Intr. 4	0-8	0.34
	8-30	0.24
Intr. 6	0-6	0.26
	6-30	0.21

SOIL STRENGTH ANALYSIS

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: SHARPSBURG After Rain							
2	2	0.70	0.52	8.27	3.98	4.16	
2	5	0.68	0.69	5.21	4.59	3.02	
2	7	0.67	0.68	7.35	4.29	2.54	
4	2	0.73	0.59	4.53	4.53	4.52	
4	5	0.56	0.53	4.47	3.68	4.78	
4	7	0.79	0.50	8.02	4.59	2.25	
6	2	0.40	0.50	8.02	3.68	3.66	
6	5	0.65	0.50	7.66	7.72	3.09	
6	7	0.70	0.50	4.75	4.90	4.64	
After Flow Additions							
2	2	0.52	0.68	8.58	6.13	0.86	
2	5	0.60	0.50	4.90	4.29	1.71	
2	7	0.62	0.70	4.59	3.06	3.66	
4	2	0.38	0.70	4.29	7.35	3.02	
4	5	0.36	0.56	3.06	6.13	2.16	
4	7	0.80	0.72	9.19	4.90	4.92	
6	2	0.40	0.48	3.68	6.13	1.63	
6	5	0.40	0.58	7.04	3.06	4.16	
6	7	0.75	0.56	4.29	6.13	2.77	
SOIL: HERSH After Rain							
2	2	0.15	0.18	3.06	1.07	7.20	
2	5	0.12	0.22	0.92	1.23	6.09	
2	7	0.10	0.22	0.77	1.68	3.98	
4	2	0.16	0.20	1.15	1.23	10.60	
4	5	0.15	0.16	1.07	1.15	5.54	
4	7	0.20	0.16	1.07	0.92	9.36	
6	2	0.18	0.22	1.15	1.84	5.90	
6	5	0.18	0.18	1.15	1.68	13.93	
6	7	0.10	0.15	0.92	0.92	5.21	
After Flow Additions							
2	2	0.08	0.21	1.53	1.99	0.76	
2	5	0.10	0.22	1.91	2.30	1.63	
2	7	0.08	0.26	0.84	2.14	1.55	
4	2	0.10	0.14	1.68	1.07	0.81	
4	5	0.10	0.20	1.07	1.91	0.83	
4	7	0.15	0.20	1.91	1.07	1.78	
6	2	0.08	0.26	1.68	1.68	4.92	
6	5	0.26	0.20	2.76	1.53	6.53	
6	7	0.14	0.20	1.91	0.92	2.77	

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: KEITH After Rain							
2	2	0.50	0.30	2.14	2.68	6.50	
2	5	0.30	0.40	1.68	1.91	6.09	
2	7	0.28	0.34	1.76	1.53	3.02	
4	2	0.22	0.31	1.00	1.18	5.21	
4	5	0.29	0.24	1.45	1.23	32.11	
4	7	0.18	0.30	1.53	1.68	4.16	
6	2	0.36	0.38	1.53	1.12	12.66	
6	5	0.24	0.28	1.53	1.93	3.95	
6	7	0.40	0.30	1.91	0.84	9.36	
After Flow Additions							
2	2	0.28	0.48	1.99	2.83	1.01	
2	5	0.36	0.40	1.23	3.06	3.32	
2	7	0.28	0.49	1.68	1.91	1.63	
4	2	0.20	0.42	0.77	3.06	3.40	
4	5	0.26	0.52	1.68	3.06	1.87	
4	7	0.32	0.35	1.84	3.83	6.09	
6	2	0.24	0.40	1.68	2.76	3.95	
6	5	0.34	0.50	1.15	1.99	2.12	
6	7	0.24	0.50	1.99	1.91	1.93	
SOIL: AMARILLO After Rain							
2	2	0.20	0.04	1.16	0.54	13.27	0.60
2	5	0.05	0.08	0.51	0.51	1.68	0.50
2	7	0.21	0.04	0.54	0.44	22.86	1.00
4	2	0.20	0.10	0.68	0.41	14.63	0.80
4	5	0.14	0.17	1.02	1.19	6.09	0.25
4	7	0.10	0.15	0.48	0.48	3.48	0.80
6	2	0.11	0.10	0.99	0.48	22.86	0.15
6	5	0.26	0.06	1.08	0.68	22.86	1.00
6	7	0.20	0.20	0.75	0.92	9.37	1.00
After Flow Additions							
2	2	0.12	0.10	1.50	1.05	5.54	0.10
2	5	0.24	0.15	1.36	1.19	6.29	0.00
2	7	0.13	0.08	2.04	1.19	1.00	0.00
4	2	0.10	0.10	1.36	1.50	1.77	0.10
4	5	0.10	0.08	1.16	1.63	6.09	0.20
4	7	0.10	0.08	0.41	0.95	0.80	
6	2	0.20	0.10	0.24	0.51	1.71	1.00
6	5	0.07	0.32	0.51	0.51	4.16	0.40
6	7	0.08	0.32	0.54	0.54	7.21	1.00

SOIL STRENGTH ANALYSIS

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL:	**WOODWARD**	After Rain					
2	2	0.40	0.22	1.53	0.46	2.37	
2	5	0.08	0.10	0.38	1.23	4.14	
2	7	0.20	0.12	0.38	0.61	2.43	
4	2	0.34	0.30	0.84	1.00	19.78	
4	5	0.30	0.30	10.72	1.00	10.53	
4	7	0.10	0.05	0.15	0.31	0.95	
6	2	0.18	0.22	1.00	1.15	10.53	0.80
6	5	0.15	0.18	0.92	0.84	2.43	1.00
6	7	0.05	0.05	0.15	0.23	0.70	0.30
After Flow Additions							
2	2	1.50	0.50	147.00	4.29	5.77	1.10
2	5	0.98	0.48	58.80	2.76	0.85	0.60
2	7	1.00	0.40	73.50	1.53	0.56	1.05
4	2	1.04	0.46	352.80	1.23	0.77	1.40
4	5	1.44	0.40	78.40	1.84	0.64	1.00
4	7	0.98	0.36	16.84	1.84	0.85	1.20
6	2	1.32	0.40	205.80	2.45	1.19	
6	5	1.48	0.16	98.00	6.13	1.04	
6	7	1.26	0.30	73.50	3.68	1.67	
SOIL:	**HEIDEN**	After Rain					
2	2	0.16	0.22	0.38	1.04	0.62	0.80
2	5	0.15	0.18	0.77	0.77	1.44	1.00
2	7	0.18	0.26	0.38	0.77	0.36	0.20
4	2	0.24	0.20	0.38	0.84	0.40	0.40
4	5	0.20	0.22	0.61	0.77	1.53	0.20
4	7	0.20	0.22	0.77	0.77	1.09	1.00
6	2	0.13	0.20	0.38	0.86	0.67	0.50
6	5	0.10	0.20	0.61	1.07	0.62	0.60
6	7	0.20	0.28	0.77	1.15	0.62	0.80
After Flow Additions							
2	2	0.22	0.36	0.61	0.84	0.58	0.80
2	5	0.15	0.20	0.77	0.69	1.67	1.20
2	7	0.10	0.24	0.38	1.15	0.43	0.50
4	2	0.12	0.20	0.38	0.77	0.56	1.10
4	5	0.16	0.30	0.77	1.15	1.05	1.20
4	7	0.22	0.28	0.84	1.00	1.05	1.10
6	2	0.13	0.40	1.15	1.53	0.81	1.50
6	5	0.12	0.24	0.46	0.92	0.50	1.00
6	7	0.10	0.35	0.69	1.76	0.50	1.20

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL:	**WHITNEY**	After Rain					
2	2	0.35	0.34	3.45	2.68	5.90	2.00
2	5	0.25	0.30	2.30	2.45	5.90	2.80
2	7	0.31	0.48	2.76	3.83	2.25	2.50
4	2	0.35	0.35	2.68	2.68	48.36	2.05
4	5	0.30	0.30	2.30	2.68	17.10	2.10
4	7	0.29	0.40	2.68	2.60	8.33	2.10
6	2	0.33	0.32	4.44	3.45	11.56	4.10
6	5	0.30	0.40	3.52	3.06	44.25	2.80
6	7	0.36	0.36	2.37	3.37	13.27	2.10
After Flow Additions							
2	2	0.45	0.56	1.15	3.37	1.34	3.00
2	5	0.28	0.45	1.15	3.22	1.83	1.80
2	7	0.30	0.50	1.84	3.29	3.66	1.80
4	2	0.22	0.48	1.15	3.52	4.78	2.00
4	5	0.20	0.52	0.77	3.45	2.44	2.10
4	7	0.30	0.50	1.99	3.06	5.54	2.20
6	2	0.28	0.52	2.60	3.52	3.40	2.00
6	5	0.40	0.53	1.53	3.52	3.85	1.90
6	7	0.30	0.55	2.68	3.83	3.66	2.60
SOIL:	**ACADEMY**	After Rain					
2	2	0.68	0.74	3.98	6.51	6.09	5.20
2	5	0.64	0.64	5.82	6.05	72.25	4.00
2	7	0.52	0.86	4.21	6.51	81.00	4.00
4	2	0.50	0.68	3.06	5.74	48.36	5.00
4	5	0.35	0.64	2.30	2.76	24.36	3.00
4	7	0.52	0.60	5.36	4.21	81.00	4.10
6	2	0.50	0.70	4.75	5.67	37.45	6.30
6	5	0.62	0.72	4.29	5.82	72.25	4.50
6	7	0.76	0.76	6.13	5.51	53.08	6.80
After Flow Additions							
2	2	0.36	1.20	3.98	6.89	7.20	3.90
2	5	0.48	1.36	5.74	6.51	7.20	3.00
2	7	0.70	0.90	4.21	6.89	12.66	4.00
4	2	0.40	0.75	3.83	6.89	5.21	4.20
4	5	0.70	0.74	3.06	4.98	22.86	4.80
4	7	0.72	0.86	5.74	5.82	8.33	5.40
6	2	0.40	0.84	6.43	6.89	3.48	6.00
6	5	0.54	0.90	4.21	6.51	6.96	6.20
6	7	0.50	0.90	3.68	6.74	6.09	5.80

SOIL STRENGTH ANALYSIS

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: LOS BANOS After Rain							
2	2	0.50	0.52	2.68	2.30	2.49	5.10
2	5	0.70	0.52	2.60	2.68	6.09	4.80
2	7	0.60	0.34	2.91	1.91	1.83	4.80
4	2	0.72	0.84	3.83	2.30	3.24	4.20
4	5	0.70	0.65	3.45	3.06	3.40	6.80
4	7	0.66	0.48	4.13	1.91	5.54	4.50
6	2	0.76	0.72	4.90	3.37	2.25	6.50
6	5	0.64	0.65	3.83	3.06	3.09	4.50
6	7	0.62	0.55	3.83	3.83	2.34	4.50
After Flow Additions							
2	2	0.82	0.74	4.59	3.83	1.77	6.10
2	5	0.74	0.60	4.75	3.37	1.08	5.00
2	7	0.75	0.50	5.21	3.83	3.24	4.80
4	2	0.75	0.75	5.82	3.06	0.81	6.20
4	5	0.90	0.64	5.51	3.45	2.49	4.60
4	7	0.80	0.52	4.59	3.68	4.39	5.20
6	2	0.92	0.90	5.05	4.21	1.83	5.80
6	5	0.90	0.80	6.43	3.40	7.20	6.00
6	7	0.72	0.70	5.51	3.98	3.02	6.00
SOIL: PORTNEUF After Rain							
2	2	0.50	0.30	3.45	0.77	14.79	7.10
2	5	0.70	0.48	3.37	2.30	133.08	6.80
2	7	0.67	0.45	2.76	2.30	21.87	7.10
4	2	0.80	0.60	4.59	2.83	20.74	7.00
4	5	0.64	0.62	3.45	3.37	14.15	7.80
4	7	0.69	0.53	3.98	3.68	10.66	5.80
6	2	0.55	0.46	4.44	4.44	29.24	5.80
6	5	0.86	0.57	4.06	4.67	9.22	5.70
6	7	0.60	0.51	5.51	3.98	21.87	7.10
After Flow Additions							
2	2	0.80	0.70	2.30	1.91	3.87	3.10
2	5	1.00	1.16	3.37	2.76	4.35	7.00
2	7	1.25	0.90	2.76	5.36	6.11	6.00
4	2	0.80	0.88	2.30	1.84	6.67	3.00
4	5	0.70	1.15	3.98	2.68	6.11	8.20
4	7	1.05	1.16	4.90	3.06	29.24	8.30
6	2	0.92	1.18	2.30	2.30	21.87	6.20
6	5	1.20	1.22	4.90	2.30	16.97	7.10
6	7	1.10	1.10	2.68	2.60	27.49	7.40

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: NANSENE After Rain							
2	2	0.34	0.64	1.84	2.76	1.50	2.00
2	5	0.38	0.50	1.07	2.91	1.93	2.00
2	7	0.40	0.53	1.91	1.38	2.12	2.20
4	2	0.54	0.50	2.68	2.83	4.78	2.80
4	5	0.32	0.42	1.07	2.76	1.93	2.90
4	7	0.32	0.48	0.92	2.68	2.59	2.10
6	2	0.52	0.60	1.91	3.22	4.16	2.80
6	5	0.34	0.50	1.38	1.38	2.44	2.60
6	7	0.53	0.50	2.37	2.60	2.59	2.10
After Flow Additions							
2	2	0.33	0.81	3.83	5.82	0.59	3.70
2	5	0.28	0.58	3.29	4.59	1.25	2.40
2	7	0.49	0.60	4.75	4.59	1.04	3.80
4	2	0.52	0.57	4.29	5.82	0.59	3.10
4	5	0.43	0.65	3.45	6.13	1.14	2.90
4	7	0.69	0.58	6.58	3.83	0.81	6.20
6	2	0.64	0.69	22.05	5.51	1.04	12.50
6	5	0.60	0.50	4.98	3.98	1.04	3.90
6	7	0.55	0.59	5.21	4.29	2.71	5.10
SOIL: PALOUSE After Rain							
2	2	0.45	0.34	1.38	1.15	1.87	2.00
2	5	0.30	0.22	1.53	1.00	4.52	2.10
2	7	0.28	0.18	0.77	0.38	2.59	1.80
4	2	0.55	0.36	1.53	1.15	2.71	2.40
4	5	0.38	0.30	1.23	1.91	1.23	2.50
4	7	0.20	0.29	1.15	1.38	0.70	2.20
6	2	0.50	0.37	1.68	1.38	1.39	2.00
6	5	0.35	0.30	1.61	1.53	3.85	2.30
6	7	0.45	0.37	2.14	1.23	3.95	2.80
After Flow Additions							
2	2	0.58	0.48	0.58	2.53	1.23	2.30
2	5	0.70	0.55	0.70	3.22	1.25	2.50
2	7	0.28	0.44	0.28	2.76	0.75	3.50
4	2	0.50	0.62	0.50	2.91	1.19	2.50
4	5	0.40	0.56	0.40	2.30	0.86	2.70
4	7	0.24	0.50	0.24	2.30	1.00	3.00
6	2	0.42	0.48	0.42	2.14	5.06	4.20
6	5	0.13	0.50	0.13	2.45	0.65	2.50
6	7	0.62	0.48	0.62	2.37	1.93	4.50

SOIL STRENGTH ANALYSIS

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**ZAHL**	After Rain					
2	2	0.50	0.34	1.99	1.30	10.16	2.70
2	5	0.50	0.30	1.84	1.07	3.48	2.50
2	7	0.42	0.32	1.84	1.23	11.56	3.00
4	2	0.52	0.40	1.53	1.38	6.96	2.00
4	5	0.56	0.45	1.30	1.38	4.92	2.60
4	7	0.40	0.45	2.14	0.77	4.05	2.50
6	2	0.60	0.42	1.38	2.14	3.57	2.00
6	5	0.53	0.35	0.77	1.15	7.20	2.70
6	7	0.60	0.32	1.38	1.00	4.78	2.40
After Flow Additions							
2	2	0.54	0.51	3.37	3.37	0.84	3.50
2	5	0.42	0.50	3.29	2.76	2.14	2.20
2	7	0.50	0.43	3.06	2.30	0.62	2.00
4	2	0.56	0.41	4.29	3.06	1.09	1.80
4	5	0.46	0.50	3.14	4.90	0.77	2.00
4	7	0.50	0.54	3.68	3.45	1.31	2.00
6	2	0.46	0.45	3.68	3.45	1.24	4.00
6	5	0.36	0.49	3.83	2.91	1.09	3.50
6	7	0.42	0.45	3.90	2.45	0.69	2.80
SOIL:	**PIERRE**	After Rain					
2	2	0.48	0.49	1.68	2.68	2.21	2.20
2	5	0.48	0.52	1.84	2.68	1.87	2.50
2	7	0.52	0.54	1.91	2.76	2.59	2.50
4	2	0.58	0.32	1.84	1.84	3.24	3.80
4	5	0.28	0.36	1.07	0.77	1.83	3.00
4	7	0.36	0.38	0.77	1.23	4.39	3.20
6	2	0.52	0.40	2.91	1.84	3.66	2.00
6	5	0.50	0.38	2.30	1.84	1.43	3.10
6	7	0.58	0.52	2.76	1.23	3.40	3.50
After Flow Additions							
2	2	0.35	0.44	2.30	3.06	0.66	1.40
2	5	0.64	0.47	2.45	3.22	1.19	1.90
2	7	0.30	0.28	2.07	3.52	1.25	1.40
4	2	0.60	0.44	3.06	3.22	1.87	1.30
4	5	0.26	0.46	2.30	2.45	2.01	2.00
4	7	0.20	0.40	0.92	2.60	1.39	1.00
6	2	0.52	0.46	1.84	2.76	0.86	2.70
6	5	0.34	0.46	1.23	2.30	1.23	2.60
6	7	0.48	0.50	2.76	3.06	2.12	3.40

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**WILLIAMS**	After Rain					
2	2	0.40	0.56	1.84	2.45	1.45	2.00
2	5	0.52	0.70	1.53	3.37	2.04	1.90
2	7	0.54	0.78	1.15	1.91	1.93	1.90
4	2	0.30	0.66	1.23	1.84	1.83	2.10
4	5	0.56	0.60	1.68	1.53	1.08	2.20
4	7	0.35	0.61	1.00	1.84	1.39	2.40
6	2	0.65	0.65	1.84	1.68	3.40	2.00
6	5	0.35	0.50	1.07	1.53	1.45	2.10
6	7	0.50	0.65	1.68	1.91	2.21	2.30
After Flow Additions							
2	2	0.55	0.72	3.06	3.45	13.50	2.40
2	5	0.48	0.90	1.53	4.21	14.30	2.20
2	7	0.40	0.90	2.45	3.68	14.00	2.10
4	2	0.70	0.82	2.37	3.68	10.00	2.10
4	5	0.55	0.60	1.91	2.68	16.00	2.10
4	7	0.55	0.60	3.06	3.83	11.20	3.00
6	2	0.56	0.55	2.68	2.37	12.30	1.80
6	5	0.45	0.80	2.68	3.37	14.30	3.30
6	7	0.60	0.69	2.30	3.45	8.80	2.30
SOIL:	**BARNES - ND**	After Rain					
2	2	0.50	0.50	2.91	1.84	2.21	3.20
2	5	0.38	0.38	2.76	1.91	4.16	4.00
2	7	0.48	0.46	3.22	1.91	3.40	3.30
4	2	0.46	0.38	2.30	1.84	2.89	3.60
4	5	0.32	0.46	1.84	1.23	3.02	3.05
4	7	0.44	0.28	2.14	1.38	3.66	3.10
6	2	0.32	0.34	1.84	1.23	3.90	3.40
6	5	0.40	0.36	2.14	2.60	3.24	3.10
6	7	0.38	0.34	2.91	1.68	3.85	3.90
After Flow Additions							
2	2	0.65	0.64	4.59	6.74	1.23	2.60
2	5	0.50	0.62	3.37	5.36	1.68	2.60
2	7	0.72	0.74	4.44	5.74	3.24	3.70
4	2	0.75	0.50	5.51	3.83	0.88	3.90
4	5	0.65	0.52	3.06	4.13	2.49	2.60
4	7	0.78	0.58	2.76	4.13	2.12	4.00
6	2	0.70	0.70	3.98	4.21	1.43	3.80
6	5	0.65	0.55	2.30	4.59	2.21	2.80
6	7	0.35	0.54	1.68	4.98	4.39	3.30

SOIL STRENGTH ANALYSIS

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: SVERDRUP		After Rain					
2	2	0.50	0.45	3.68	1.99	14.63	2.60
2	5	0.52	0.36	2.68	1.84	17.10	2.40
2	7	0.65	0.32	3.22	1.23	29.86	3.00
4	2	0.48	0.32	1.91	1.30	20.25	2.60
4	5	0.40	0.30	1.61	1.53	14.63	3.80
4	7	0.48	0.42	1.91	1.91	14.63	3.80
6	2	0.40	0.35	1.91	1.84	22.86	2.80
6	5	0.45	0.40	1.23	1.84	29.86	2.00
6	7	0.32	0.36	1.23	2.45	26.01	2.20
After Flow Additions							
2	2	0.55	0.42	4.75	2.76	6.96	1.80
2	5	0.55	0.50	3.45	2.68	2.71	3.40
2	7	0.68	0.50	4.90	3.37	7.74	2.30
4	2	0.60	0.28	4.90	2.68	4.39	2.10
4	5	0.65	0.45	5.21	2.76	6.50	2.70
4	7	0.62	0.42	5.74	4.13	4.16	3.70
6	2	0.40	0.56	1.99	3.06	5.90	1.80
6	5	0.50	0.28	2.68	2.30	9.36	2.00
6	7	0.62	0.50	2.76	3.37	6.29	2.50
SOIL: BARNES - MN			After Rain				
2	2	0.56	0.48	2.45	1.53	3.02	3.00
2	5	0.60	0.42	1.53	1.76	4.39	2.25
2	7	0.60	0.46	2.30	2.30	5.06	2.80
4	2	0.44	0.30	1.91	1.61	3.66	3.90
4	5	0.50	0.46	2.60	1.99	3.09	4.00
4	7	0.52	0.44	3.06	1.91	3.95	2.20
6	2	0.54	0.36	2.45	2.30	5.06	4.00
6	5	0.48	0.38	2.68	2.30	4.16	2.70
6	7	0.52	0.44	1.91	1.53	3.48	3.70
After Flow Additions							
2	2	0.56	0.50	3.37	3.06	1.32	2.90
2	5	0.60	0.50	4.44	2.30	1.87	4.60
2	7	0.60	0.56	3.83	3.45	2.77	3.30
4	2	0.50	0.52	5.36	3.52	1.19	2.20
4	5	0.70	0.65	3.98	2.45	1.57	2.60
4	7	0.40	0.50	3.37	3.68	2.01	2.00
6	2	0.64	0.45	3.83	3.06	1.14	3.20
6	5	0.56	0.58	1.99	3.98	2.49	3.20
6	7	0.60	0.55	3.52	3.06	1.87	2.00

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL: MEXICO		After Rain					
2	2	0.22	0.30	1.23	0.61	15.96	0.80
2	5	0.32	0.30	1.23	1.07	12.48	1.10
2	7	0.34	0.30	1.684	1.07	3.24	1.80
4	2	0.20	0.36	1.15	1.07	1.50	0.90
4	5	0.40	0.34	2.76	1.23	1.24	1.50
4	7	0.32	0.28	1.99	1.68	2.50	1.70
6	2	0.30	0.24	1.84	1.23	2.21	2.30
6	5	0.40	0.28	1.38	1.38	1.32	1.60
6	7	0.36	0.28	1.30	1.68	1.42	1.30
After Flow Additions							
2	2	0.24	0.28	1.23	0.77	1.54	1.00
2	5	0.22	0.26	0.78	1.07	2.19	1.70
2	7	0.24	0.26	1.68	1.53	0.95	2.60
4	2	0.34	0.42	1.07	1.23	1.19	2.20
4	5	0.56	0.34	1.30	1.68	0.95	1.7
4	7	0.38	0.36	1.23	1.15	0.72	0.70
6	2	0.16	0.20	0.61	0.77	1.72	0.50
6	5	0.18	0.26	0.92	1.53	2.69	1.00
6	7	0.16	0.22	0.77	1.23	2.50	1.40
SOIL: GRENADA			After Rain				
2	2	0.38	0.36	1.99	1.38	5.26	1.70
2	5	0.42	0.43	2.14	1.91	2.69	2.40
2	7	0.30	0.28	1.68	1.53	2.19	0.70
4	2	0.28	0.28	1.30	1.61	6.50	1.30
4	5	0.28	0.28	1.23	1.23	11.56	1.30
4	7	0.35	0.30	1.15	0.92	1.42	1.90
6	2	0.36	0.40	1.91	0.92	2.19	1.90
6	5	0.33	0.31	1.38	1.53	1.39	0.80
6	7	0.26	0.25	0.77	0.77	1.67	0.50
After Flow Additions							
2	2	0.10	0.28	0.51	1.02	0.88	1.60
2	5	0.25	0.24	0.95	1.70	1.82	1.70
2	7	0.32	0.28	0.85	2.18	0.97	0.85
4	2	0.20	0.24	1.43	0.99	1.93	2.00
4	5	0.26	0.36	1.57	1.09	0.81	1.30
4	7	0.07	0.26	0.78	1.70	0.81	1.50
6	2	0.10	0.24	0.75	2.11	0.81	0.70
6	5	0.10	0.30	0.54	1.12	0.90	0.50
6	7	0.20	0.28	0.51	0.85	0.75	0.30

SOIL STRENGTH ANALYSIS

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL: TIFTON After Rain							
2	2	0.14	0.24	1.50	1.23	38.22	1.50
2	5	0.22	0.24	1.70	1.57	43.12	1.60
2	7	0.16	0.26	2.31	1.50	29.23	0.30
4	2	0.26	0.26	1.57	1.50	58.52	1.30
4	5	0.24	0.30	2.18	1.23	29.23	2.40
4	7	0.24	0.26	1.77	1.36	43.12	1.00
6	2	0.18	0.34	1.53	1.29	29.23	1.40
6	5	0.30	0.28	1.84	1.70	69.90	1.40
6	7	0.20	0.26	1.43	1.70	37.45	1.40
After Flow Additions							
2	2	0.26	0.36	1.36	2.04	6.17	1.20
2	5	0.36	0.44	3.06	2.72	14.63	4.60
2	7	0.50	0.45	3.06	3.13	11.56	3.20
4	2	0.26	0.32	1.84	2.38	2.00	0.90
4	5	0.34	0.30	3.13	2.38	14.63	3.70
4	7	0.30	0.40	2.99	2.93	15.96	3.60
6	2	0.28	0.30	1.87	3.06	5.26	2.50
6	5	0.16	0.32	1.87	2.55	13.53	1.00
6	7	0.28	0.26	1.46	1.91	4.36	1.00
SOIL: BONIFAY After Rain							
2	2	0.20	0.25	1.38	0.92	4.55	1.40
2	5	0.22	0.24	1.84	1.38	4.78	1.40
2	7	0.28	0.23	1.53	1.15	3.11	0.90
4	2	0.18	0.23	1.07	0.92	4.36	1.00
4	5	0.20	0.30	1.23	0.77	3.82	1.40
4	7	0.24	0.26	1.07	0.77	7.74	1.30
6	2	0.20	0.22	1.00	1.07	6.50	1.50
6	5	0.24	0.20	0.84	0.92	3.00	1.40
6	7	0.28	0.23	1.30	1.07	6.17	1.40
After Flow Additions							
2	2	0.26	0.65	7.04	2.76	6.89	3.80
2	5	0.52	0.27	6.74	2.37	32.84	4.70
2	7	0.50	0.32	6.58	1.91	21.11	4.60
4	2	0.44	0.36	6.28	3.37	2.69	3.70
4	5	0.38	0.32	6.89	3.22	9.36	3.00
4	7	0.44	0.30	7.04	1.91	6.50	4.30
6	2	0.40	0.20	4.98	1.53	4.36	3.60
6	5	0.44	0.26	4.44	3.06	5.26	3.30
6	7	0.43	0.24	6.13	2.14	6.50	3.70

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL: CECIL (ERODED) After Rain							
2	2	0.50	0.54	2.68	3.83	6.50	2.30
2	5	0.46	0.46	1.91	3.22	3.66	2.80
2	7	0.36	0.57	2.91	3.68	2.69	3.00
4	2	0.36	0.44	1.76	2.60	5.02	1.70
4	5						
4	7	0.42	0.42	2.91	2.14	8.24	2.50
6	2	0.30	0.35	4.98	2.22	5.02	1.90
6	5	0.40	0.44	2.45	2.68	6.17	1.50
6	7	0.20	0.32	2.22	1.53	4.36	2.60
After Flow Additions							
2	2	0.24	0.36	1.84	3.22	2.06	2.90
2	5	0.22	0.46	1.07	1.99	1.88	1.00
2	7	0.36	0.50	3.68	3.83	6.89	3.30
4	2	0.24	0.40	2.30	2.14	5.02	2.50
4	5	0.20	0.44	1.53	2.91	1.00	2.30
4	7	0.30	0.40	2.30	2.68	1.58	2.70
6	2	0.30	0.52	3.68	3.68	5.54	2.60
6	5	0.24	0.50	0.61	2.30	1.63	1.50
6	7	0.26	0.34	3.37	2.68	3.51	2.30
SOIL: HIWASSEE After Rain							
2	2	0.30	0.36	2.30	1.99	5.54	1.70
2	5	0.26	0.45	1.68	2.60	21.11	1.70
2	7	0.38	0.40	1.53	1.91	5.26	2.30
4	2	0.40	0.42	2.30	3.06	9.36	1.40
4	5	0.34	0.38	1.91	2.14	13.46	2.00
4	7	0.34	0.42	1.84	2.30	8.24	1.50
6	2	0.32	0.44	3.37	2.91	11.56	2.00
6	5	0.28	0.34	1.91	1.91	13.46	1.80
6	7	0.30	0.42	2.30	2.30	4.55	1.60
After Flow Additions							
2	2	0.23	0.38	2.91	2.30	2.69	1.70
2	5	0.24	0.48	2.30	1.84	3.98	2.40
2	7	0.22	0.46	1.53	2.76	4.55	1.00
4	2	0.40	0.46	2.45	3.29	5.26	2.50
4	5	0.40	0.40	1.53	1.99	3.37	1.40
4	7	0.30	0.50	2.30	2.60	3.11	2.00
6	2	0.52	0.44	3.45	3.06	6.50	2.30
6	5	0.36	0.38	2.45	1.68	3.37	1.70
6	7	0.32	0.44	2.60	2.68	3.37	1.50

SOIL STRENGTH ANALYSIS

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**GASTON**	After Rain					
2	2	0.34	0.36	1.15	1.91	2.68	1.00
2	5	0.20	0.27	0.92	1.15	0.55	2.10
2	7	0.35	0.42	1.84	1.15	1.09	1.00
4	2	0.34	0.36	1.38	0.92	1.66	0.90
4	5	0.44	0.34	1.07	1.07	1.60	2.30
4	7	0.24	0.30	0.46	0.77	1.66	1.70
6	2	0.30	0.28	1.91	1.15	4.48	1.70
6	5	0.24	0.36	1.07	1.23	2.08	1.90
6	7	0.36	0.38	0.92	1.68	2.25	1.10
After Flow Additions							
2	2	0.20	0.32	0.46	0.77	0.69	1.00
2	5	0.16	0.26	0.77	1.15	0.66	1.50
2	7	0.16	0.32	0.77	1.38	0.95	1.40
4	2	0.10	0.36	1.30	0.92	1.00	1.30
4	5	0.14	0.33	1.38	1.53	0.92	2.00
4	7	0.20	0.20	1.23	1.99	0.92	0.60
6	2	0.35	0.30	1.30	1.53	3.24	1.20
6	5	0.14	0.38	1.38	2.30	0.75	2.20
6	7	0.18	0.34	0.77	1.23	0.67	1.40
SOIL:	**OPEQUON**	After Rain					
2	2	0.70	0.32	1.84	1.07	1.72	2.40
2	5	0.81	0.44	1.99	1.68	1.67	2.40
2	7	0.72	0.44	2.60	1.68	1.42	2.30
4	2	0.60	0.38	1.53	1.23	1.77	2.30
4	5	0.60	0.36	1.68	3.06	1.76	2.00
4	7	0.56	0.34	1.91	1.00	1.85	2.40
6	2	0.68	0.27	1.91	2.68	1.93	1.80
6	5	0.88	0.30	2.76	1.30	2.00	1.80
6	7	0.73	0.36	1.53	1.23	2.78	1.70
After Flow Additions							
2	2	0.25	0.46	1.15	1.99	1.39	2.30
2	5	0.26	0.38	2.07	1.07	5.02	2.20
2	7	0.18	0.38	1.91	1.76	1.25	1.70
4	2	0.26	0.34	1.68	2.14	1.42	3.00
4	5	0.48	0.40	1.53	1.91	2.19	3.10
4	7	0.28	0.38	2.14	2.76	1.46	2.50
6	2	0.20	0.36	2.45	1.68	2.69	3.40
6	5	0.32	0.33	2.30	2.68	1.32	3.00
6	7	0.38	0.35	1.68	1.53	1.63	2.30

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**FREDERICK**	After Rain					
2	2	0.32	0.28	1.53	1.23	1.54	1.70
2	5	0.30	0.35	1.38	1.53	2.69	2.10
2	7	0.40	0.40	1.84	1.38	2.19	1.80
4	2	0.34	0.34	1.30	2.22	2.69	1.80
4	5	0.28	0.36	1.23	1.61	1.93	1.40
4	7	0.32	0.38	1.15	1.53	1.72	1.40
6	2	0.32	0.26	1.15	1.23	2.69	1.50
6	5	0.30	0.34	1.07	1.84	2.69	1.70
6	7	0.36	0.28	0.77	1.53	2.19	1.00
After Flow Additions							
2	2	0.55	0.34	7.04	1.68	9.36	3.70
2	5	0.45	0.32	1.07	2.45	0.83	1.60
2	7	0.46	0.44	2.68	2.83	1.25	2.00
4	2	0.46	0.40	1.53	2.60	8.76	5.20
4	5	0.23	0.40	1.15	2.30	0.86	1.30
4	7	0.24	0.34	1.07	1.76	2.89	2.60
6	2	0.44	0.30	4.21	2.60	6.50	8.70
6	5	0.36	0.40	1.15	1.23	1.14	1.50
6	7	0.28	0.42	1.53	2.14	2.19	1.50
SOIL:	**MANOR**	After Rain					
2	2	0.33	0.30	2.30	1.30	4.78	1.70
2	5	0.32	0.34	2.45	1.53	2.19	1.60
2	7	0.34	0.34	2.14	1.38	3.37	2.00
4	2	0.24	0.35	1.68	1.68	1.28	2.00
4	5	0.34	0.30	1.84	1.38	2.06	2.20
4	7	0.48	0.32	2.45	1.68	1.77	2.30
6	2	0.36	0.38	1.53	1.15	2.41	2.00
6	5	0.32	0.40	2.68	1.91	1.82	2.30
6	7	0.26	0.42	1.84	1.91	2.00	1.50
After Flow Additions							
2	2	0.24	0.40	0.61	1.38	1.09	2.90
2	5	0.24	0.35	2.14	2.14	1.35	2.40
2	7	0.18	0.42	1.99	1.91	1.66	2.30
4	2	0.44	0.44	1.68	2.68	1.60	3.00
4	5	0.16	0.40	0.46	0.77	2.00	2.10
4	7	0.18	0.26	0.77	2.14	1.27	0.80
6	2	0.25	0.38	1.91	1.84	1.12	2.40
6	5	0.24	0.44	1.84	2.60	1.54	2.00
6	7	0.26	0.46	2.60	1.84	2.56	4.20

SOIL STRENGTH ANALYSIS

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**CARIBOU**	After Rain					
2	2	0.26	0.26	1.53	1.23	5.84	1.30
2	5	0.16	0.32	1.38	1.15	1.93	0.70
2	7	0.28	0.30	1.23	1.23	2.19	1.70
4	2	0.28	0.28	1.15	0.92	2.26	1.50
4	5	0.34	0.30	1.23	1.23	2.06	2.10
4	7	0.26	0.28	1.15	0.77	2.12	1.30
6	2	0.30	0.25	1.68	0.77	3.98	1.60
6	5	0.30	0.26	1.38	1.07	2.34	1.10
6	7	0.26	0.24	1.15	0.77	2.50	0.70
After Flow Additions							
2	2	0.26	0.34	1.38	1.91	2.34	1.10
2	5	0.30	0.32	1.53	1.15	3.11	1.00
2	7	0.30	0.28	1.68	1.84	2.78	1.00
4	2	0.22	0.28	1.15	1.23	9.36	0.30
4	5	0.24	0.34	1.91	1.53	2.78	1.50
4	7	0.20	0.26	1.68	1.15	1.46	0.60
6	2	0.24	0.22	2.76	1.23	10.73	0.70
6	5	0.24	0.26	1.38	1.15	3.37	1.30
6	7	0.12	0.14	0.77	1.15	3.11	0.90
SOIL:	**COLLAMER**	After Rain					
2	2	0.26	0.30	1.53	2.83	2.45	1.80
2	5	0.34	0.34	1.23	1.15	3.60	1.50
2	7	0.32	0.32	1.38	1.15	1.44	1.30
4	2	0.30	0.36	1.23	1.30	5.77	1.70
4	5	0.32	0.28	1.23	1.84	1.19	2.40
4	7	0.36	0.29	1.07	1.15	1.66	1.70
6	2	0.35	0.32	1.23	1.23	2.45	1.70
6	5	0.30	0.35	1.53	1.23	1.85	1.60
6	7	0.26	0.26	0.77	1.38	1.27	1.40
After Flow Additions							
2	2	0.26	0.29	0.61	1.53	2.08	3.50
2	5	0.07	0.34	1.15	1.07	2.08	2.20
2	7	0.20	0.35	1.15	0.92	0.67	3.50
4	2	0.30	0.41	1.38	1.53	1.66	1.80
4	5	0.16	0.36	1.07	1.07	1.16	1.90
4	7	0.08	0.30	0.38	1.91	1.03	0.90
6	2	0.28	0.30	1.23	1.53	1.19	1.70
6	5	0.16	0.36	0.92	1.68	1.60	1.50
6	7	0.15	0.26	0.77	1.38	0.85	2.30

Rill	Dist.	Torvane		Penetrometer		Fall Cone	Inter.
No.	Down	bottom	side	bottom	side	Index	Vane
SOIL:	**MIAMIAN**	After Rain					
2	2	0.32	0.38	1.84	2.30	3.98	2.60
2	5	0.30	0.36	1.53	1.53	2.34	2.00
2	7	0.25	0.42	0.92	2.14	1.72	1.40
4	2	0.26	0.30	1.53	2.22	1.39	2.00
4	5	0.24	0.32	1.07	1.91	2.19	1.70
4	7	0.24	0.38	1.53	1.76	1.63	2.10
6	2	0.34	0.34	1.76	2.14	3.98	2.00
6	5	0.28	0.36	1.91	1.99	5.84	1.70
6	7	0.30	0.36	1.23	2.53	2.89	1.60
After Flow Additions							
2	2	0.22	0.38	1.15	2.60	1.54	3.60
2	5	*NS*	0.26	*NS*	2.68	*NS*	*NS*
2	7	0.10	0.28	1.53	2.30	*NS*	*NS*
4	2	0.24	0.35	1.38	2.45	1.54	*NS*
4	5	0.16	0.44	*NS*	*NS*	*NS*	*NS*
4	7	0.16	0.40	0.77	*NS*	*NS*	1.70
6	2	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
6	5	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
6	7	*NS*	*NS*	*NS*	*NS*	*NS*	*NS*
SOIL:	**LEWISBURG**	After Rain					
2	2	0.30	0.40	1.07	1.84	1.72	2.30
2	5	0.30	0.32	1.23	1.84	1.35	1.80
2	7	0.20	0.44	1.38	1.68	1.72	1.70
4	2	0.26	0.30	1.30	1.68	2.42	1.30
4	5	0.38	0.40	1.15	1.91	2.19	1.40
4	7	0.36	0.38	1.53	1.91	2.34	2.40
6	2	0.32	0.32	1.45	1.45	2.59	1.80
6	5	0.28	0.36	1.53	1.68	1.39	2.00
6	7	0.30	0.32	1.53	1.53	2.50	1.40
After Flow Additions							
2	2	0.32	0.38	1.53	1.84	3.66	1.90
2	5	0.10	0.40	0.77	1.91	1.72	2.50
2	7	0.22	0.38	1.15	1.68	1.93	2.40
4	2	0.26	0.29	1.15	1.84	2.06	0.80
4	5	0.18	0.44	0.77	1.99	1.72	2.70
4	7	0.14	0.36	0.92	1.84	2.34	*NS*
6	2	0.27	0.33	2.07	1.99	2.34	1.70
6	5	0.32	0.38	1.84	1.99	2.19	2.80
6	7	0.32	0.38	1.68	1.76	*NS*	2.30

SOIL STRENGTH ANALYSIS

Rill No.	Dist. Down	Torvane bottom	Torvane side	Penetrometer bottom	Penetrometer side	Fall Cone Index	Inter. Vane
SOIL:	**MIAMI**	After Rain					
2	2	0.29	0.33	1.53	1.68	1.54	2.30
2	5	0.34	0.32	2.76	2.68	1.63	2.40
2	7	0.30	0.34	1.84	1.84	2.19	2.00
4	2	0.35	0.44	1.53	2.07	1.82	2.20
4	5	0.26	0.35	1.38	2.30	1.46	2.30
4	7	0.32	0.38	1.38	2.14	3.11	1.00
6	2	0.34	0.35	1.07	1.38	2.34	1.70
6	5	0.30	0.44	1.68	1.84	2.69	1.40
6	7	0.26	0.36	1.23	1.76	2.00	2.00
After Flow Additions							
2	2	0.34	0.30	1.15	2.07	2.12	2.30
2	5	0.34	0.42	1.15	1.68	1.72	2.30
2	7	0.21	0.36	1.15	2.45	3.11	1.50
4	2	0.30	0.34	1.61	2.68	1.04	2.80
4	5	0.32	0.36	1.30	2.30	1.93	2.20
4	7	0.20	0.36	1.84	2.30	7.28	1.80
6	2	0.18	0.42	1.68	2.07	0.95	1.20
6	5	0.20	0.38	1.23	2.07	1.14	*NS*
6	7	0.28	0.40	1.61	1.91	4.78	2.10

SOIL STRENGTH ANALYSIS OF EXTERNAL TEST PLOT

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Sharpsburg		0.53		5.51	
Hersh		0.08		1.00	0.56
Keith	12:50	0.75			
	12:52			1.00	
	2:30				1.19
Amarillo	2:21	0.14			
	2:22			2.11	
	2:24				1.00
Woodward	12:52			1.91	
	3:43				1.36
	4:00	0.22			
Heiden	3:04	0.20		1.19	
	3:20				1.09
Whitney	3:03			4.59	
	3:03			3.37	
	3:03			3.83	1.25
	3:18			4.59	
	3:18			3.98	
	3:18			4.21	
	3:26		2.9		1.57
	4:08	0.56		4.59	
	4:08	0.50		5.51	
	4:08	0.48		4.82	2.49
	4:35	0.45			
	4:35	0.52			
	4:35	0.56			2.77
	5:09	0.72		4.90	
	5:09	0.50		5.51	
	5:09	0.50		4.59	

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Academy	4:16	0.10		0.92	0.75
	4:16	0.12		0.77	
	4:16	0.10		0.77	
	4:42	0.30		3.06	1.04
	4:42	0.24		2.68	
	4:42	0.26		2.45	
	5:08	0.34		5.36	
	5:08	0.50		5.21	
	5:08	0.36		4.75	
	5:15				3.66
	5:34	0.55		3.83	
	5:34	0.50		6.13	
	5:34	0.44		6.51	
Los Banos	5:10				1.19
	5:31	0.50		4.29	
	5:31	0.54		4.21	
	5:31	0.70		4.13	
	5:45				1.87
	6:34				2.25
	7:24	0.60		6.43	
	7:24	0.80		6.43	
	7:24	0.75		6.28	
	7:39				4.16
	7:53	0.70		5.05	
	7:53	0.82		6.43	
	7:53	0.88		5.36	
Portneuf	11:25	0.40		2.30	2.34
	11:25	0.35		2.53	
	11:25	0.44		2.30	
	11:47	0.49		5.59	
	11:47	0.48		5.28	
	11:47	0.58		5.21	
	11:52				2.99
	12:35				4.92
	1:07				5.62
	1:37	0.88		3.37	
	1:37	1.00		2.74	

SOIL STRENGTH ANALYSIS OF EXTERNAL TEST PLOT

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Portneuf	1:37	1.00		3.06	16.19
	2:00	0.85		4.79	
	2:00	0.80		3.75	
	2:00	0.92		4.67	
Nansene	12:45	0.40		1.99	1.05
	12:45	0.31		2.60	
	12:45	0.32		2.30	
	1:00	0.45		4.29	
	1:00	0.40		4.21	
	1:00	0.60		4.90	
	1:12				2.71
	1:49	0.64		6.89	
	1:49	0.69		6.89	
	1:49	0.44		6.13	
	1:52				1.93
	2:24	0.88		19.91	2.89
	2:24	0.86		16.23	
	2:24	0.83		15.93	
	2:46	0.92		18.68	3.95
	2:46	0.92		20.83	
	2:46	0.90		16.84	
	3:20	0.75		20.21	
	3:20	0.94		20.83	
	3:20	0.72		23.28	
Palouse	1:44	0.13			
	1:44	0.18			
	1:44	0.20			0.75
	2:01	0.22			
	2:01	0.25			
	2:01	0.38			
	2:15				0.76
	2:45	0.26		2.45	
	2:45	0.28		2.76	
	2:45	0.42		2.83	
	2:50				0.94
	3:17	0.52		3.37	
	3:17	0.48		3.29	
Palouse	3:17	0.48		3.06	
	3:22				1.19
	3:45	0.45		4.29	3.09
	3:45	0.50		4.29	
	3:45	0.50		3.45	
	4:19	0.62		4.90	
	4:19	0.50		4.44	
	4:19	0.58		4.67	
Zahl	12:48	0.48		3.83	
	12:48	0.40		3.37	
	12:48	0.38		3.83	
	12:56				2.49
	1:03	0.60		3.83	
	1:03	0.50		3.06	
	1:03	0.55		2.91	
	1:18				3.95
	1:53				4.52
	2:20				2.04
	2:48	0.50		4.98	3.24
	2:48	0.64		5.97	
	2:48	0.70		5.67	
	3:35	0.76		5.67	
	3:35	0.65		6.89	
	3:35	0.80		6.89	
Pierre	12:37	0.36		3.37	
	12:37	0.42		3.22	
	12:37	0.40		3.06	
	1:12	0.38		2.91	
	1:12	0.40		3.37	
	1:12	0.38		3.22	
	1:17				1.07
	2:04				1.43
	2:33				2.21
	3:21	0.55		4.59	
	3:21	0.50		5.36	
	3:21	0.75		4.59	

SOIL STRENGTH ANALYSIS OF EXTERNAL TEST PLOT

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Pierre	3:26				2.01
	3:40	0.45		4.98	1.25
	3:40	0.50		5.36	
	3:40	0.46		5.74	
Williams	1:42	0.92		2.68	
	1:42	0.64		3.22	
	1:42	0.90		4.06	1.71
	2:03	0.70		5.59	
	2:03	0.65		3.68	
	2:03	0.72		5.21	
	2:18				2.25
	3:01				2.01
	3:37				3.02
	4:28				2.89
	4:36	0.70		4.75	
	4:36	0.75		5.74	
	4:36	0.75		6.13	
Barnes - MN	1:28	0.73		6.74	
	1:28	0.45		5.36	
	1:28	0.62		5.74	
	1:40				1.28
	2:03	0.42		3.83	
	2:03	0.60		4.13	
	2:03	0.48		4.13	1.93
	2:48				1.55
	3:24				1.71
	3:56				3.02
	4:33	0.70		4.21	
	4:33	0.60		4.59	
	4:33	0.52		4.98	
Sverdrup	10:13	0.61		4.98	
	10:13	0.50		5.82	
	10:13	0.60		4.29	5.54
	10:33	0.60		6.13	
	10:33	0.50		5.82	

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Sverdrup	10:33	0.70		5.51	
	10:43				3.66
	11:15				3.95
	11:38				3.09
	12:11				3.40
Barnes - ND	9:57	0.44		3.22	
	9:57	0.70		2.76	
	9:57	0.45		3.83	
	10:06				2.44
	10:21	0.44		3.52	
	10:21	0.53		3.45	
	10:21	0.58		3.83	
	10:33				2.01
	11:11				2.25
	11:40				1.25
	12:07				1.71
	12:47	0.65		4.29	
	12:47	0.60		5.36	
	12:47	0.72		5.74	
Mexico	2:23	0.18	2.0	1.38	0.78
Grenada	2:53	0.18	2.0	1.15	0.93
Tifton	2:39	0.34	2.3	2.79	2.69
Bonifay	2:45	0.38	6.3	17.15	3.82
	4:25	0.38	5.0	6.28	2.12
Cecil (Eroded)	10:56	0.58	4.6	4.44	4.16
Hiwassee	1:19	0.34		2.91	
	1:28		2.2		3.98
Gaston	2:31	0.40	3.0	2.60	1.49

SOIL STRENGTH ANALYSIS OF EXTERNAL TEST PLOT

Soil	Time hr:min	Vane	Inter. Vane	Pocket	Fall Cone Index
Opequon	2:58	0.30	2.9	2.14	2.19
Frederick	3:00				1.39
	3:15	0.38	4.0	3.98	
	3:25				3.11
Manor	2:09				1.82
	2:28	0.32	2.2	2.60	2.06
Caribou	11:41	0.24	1.4	1.53	
	11:47				2.50
Collamer	1:42	0.24	1.8	1.07	0.85
Miamian	5:26	0.32	4.5	3.37	3.11
Lewisburg	11:00	0.16	2.2	0.92	0.81
Miami	3:22	0.24		1.84	
	3:30				1.58

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Sharpsburg			<- - - millimeters - - ->			<- - - - - - - - - - - - - microns - - - - - - - - - - - - - - ->						
6	I	A	5.87	11.45	7.53	5.68	6.05	19.0945	14.43	12.78	6.60	10.51
8	I	A	7.51	11.59	7.97	5.74	6.54	-2.10	23.80	11.37	8.19	19.40
3	R	A	5.43	13.31	9.29	6.47	9.00	15.0576	14.69	9.56	4.93	12.27
5	R	A	7.14	15.39	9.36	6.38	6.17	5.30	20.97	11.09	5.44	12.76
3	R	B	16.43	15.93	13.37	6.14	5.91	11.46	14.20	8.35	4.18	4.04
5	R	B	19.05	19.16	8.63	5.31	5.94	2.15	17.63	0.00	7.52	14.62
3	R	C	24.55	13.34	9.58	5.65	5.37	10.9986	10.17	6.59	4.62	9.13
5	R	C	21.53	15.75	8.51	6.01	5.83	2.72	15.16	8.72	2.08	13.70
Hersh												
6	I	A	0.90	5.41	30.43	27.19	22.28	7.58	3.92	0.86	0.29	1.15
8	I	A	0.52	4.91	32.10	28.53	21.93	7.8553	1.41	0.91	0.42	1.41
3	R	A	1.44	5.29	27.49	27.85	23.20	5.3219	2.40	0.55	4.06	2.40
5	R	A	0.96	21.06	28.28	8.28	13.08	6.36	10.41	3.76	5.20	2.60
3	R	C	1.11	19.95	32.62	23.59	15.68	1.80	1.97	1.81	0.66	0.82
5	R	C	0.96	33.99	20.59	19.90	14.79	2.4858	2.20	2.36	0.94	1.78
Keith												
6	I	A	0.74	2.35	4.58	9.70	44.07	12.08	8.97	6.08	4.92	6.51
8	I	A	0.45	1.60	3.92	19.52	45.18	29.9474	-0.14	-0.12	-0.14	-0.22
3	R	A	0.86	3.00	5.99	8.08	43.63	2.62	5.88	9.48	12.70	7.77
5	R	A	0.90	2.20	4.88	16.60	39.50	9.3566	5.75	6.11	3.95	10.77
3	R	B	2.84	1.50	5.26	14.55	43.52	25.36	0.00	3.92	3.05	0.00
5	R	B	1.75	10.22	5.91	11.30	38.72	14.6520	5.69	7.89	1.65	2.20
3	R	C	1.32	2.44	4.87	7.31	43.82	11.32	11.29	5.17	2.82	9.64
5	R	C	1.23	3.37	5.36	5.80	40.40	12.10	14.14	2.40	5.60	9.60
Amarillo												
6	I	A	0.04	0.99	20.46	37.15	23.79	6.25	4.32	0.31	3.60	3.09
8	I	A	0.17	1.45	23.79	36.88	22.79	4.1126	1.54	2.06	4.12	3.09
3	R	A	0.79	5.96	23.84	0.11	1.99	24.94	2.19	19.36	9.86	10.96
5	R	A	0.23	3.73	45.06	16.13	1.74	-2.5403	11.38	8.85	6.58	8.85
3	R	B	0.47	1.88	24.27	27.66	27.19	17.86	0.28	0.14	0.07	0.18
5	R	B	0.11	0.21	7.20	55.37	24.92	6.9437	1.01	1.13	0.80	2.30
3	R	C	0.48	0.00	22.13	35.70	27.04	-3.42	5.39	7.52	5.64	-0.38
5	R	C	0.50	1.85	25.75	36.80	23.17	-1.48	1.74	5.12	5.41	1.16
Woodward												
6	I	A	0.14	0.54	1.16	5.32	38.82	31.16	5.27	10.54	5.84	1.21
8	I	A	0.19	0.69	1.62	6.39	48.39	20.04	16.97	3.09	-0.33	2.98
3	R	A	0.60	1.25	2.34	6.33	44.08	14.03	19.03	10.90	0.04	1.41
5	R	A	0.77	1.38	1.57	15.25	47.63	8.28	4.59	15.05	4.90	0.58
3	R	B	1.57	1.45	1.90	9.80	56.13	7.37	4.66	16.31	0.06	0.74
5	R	B	1.52	1.67	2.49	34.44	32.33	7.08	4.60	15.27	-0.05	0.64

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Woodward			<- - - millimeters		- - ->	<- - - - - - - - -			microns - - - -			- - - ->
3	R	C	1.07	1.90	2.67	6.15	39.33	18.17	15.52	8.10	1.52	5.57
5	R	C	0.85	1.36	2.31	6.34	38.34	20.54	15.55	7.69	1.00	6.02
Heiden												
8	I	A	23.56	32.18	13.45	4.95	2.33	-3.6973	3.03	3.03	7.26	13.92
3	R	C	28.36	16.34	17.20	8.60	7.11	1.5349	2.20	6.59	6.59	5.49
Whitney												
6	I	A	8.52	18.93	24.79	17.88	9.83	6.3459	2.36	6.05	2.84	2.46
8	I	A	6.86	17.91	24.93	18.97	12.52	4.88	5.80	3.36	2.49	2.28
3	R	A	14.19	28.45	21.27	9.73	4.69	2.6112	6.15	5.95	2.22	4.74
5	R	A	9.26	19.27	23.14	17.07	9.14	4.73	7.31	5.17	1.34	3.57
3	R	B	17.45	17.86	17.26	10.98	11.64	5.10	7.47	4.16	3.36	4.73
3	R	C	12.56	10.29	21.05	19.92	11.92	6.78	5.65	4.57	2.06	5.20
5	R	C	10.43	16.43	25.28	18.93	8.81	6.0872	4.53	3.13	2.60	3.79
Academy												
3	R	A	6.44	11.46	9.74	6.75	6.94	10.7032	14.83	21.01	0.49	11.62
6	I	A	3.05	9.58	15.78	17.43	14.16	13.0261	10.12	5.98	6.90	3.99
8	I	A	2.66	8.05	15.32	18.02	16.77	14.48	9.99	4.71	4.14	5.86
5	R	A	4.50	9.53	15.74	15.26	10.73	10.95	13.18	9.33	3.11	7.70
3	R	B	5.20	2.65	1.63	4.04	19.52	19.21	20.59	20.59	6.57	0.00
5	R	B	4.83	10.20	13.79	16.61	17.85	11.36	12.85	6.26	4.17	2.09
3	R	C	4.33	9.38	14.63	18.73	19.08	10.6783	12.60	7.31	2.52	0.76
5	R	C	5.15	6.41	12.56	21.31	17.23	10.82	11.79	6.83	5.36	2.55
Los Banos												
6	I	A	1.29	7.53	11.49	12.39	18.49	14.11	9.74	11.00	8.93	5.04
8	I	A	1.12	8.27	12.77	12.38	18.18	8.54	14.10	11.53	11.83	1.28
3	R	A	2.52	10.36	11.96	7.89	10.16	8.0101	8.38	15.02	13.57	12.13
5	R	A	2.17	13.41	15.31	9.33	9.91	4.70	11.74	12.63	12.93	7.88
3	R	B	9.54	14.97	15.09	12.58	14.19	5.16	13.31	5.55	1.48	8.13
5	R	B	6.27	10.03	10.73	12.89	16.20	-21.16	30.03	15.01	5.00	15.01
3	R	C	0.76	22.55	28.43	14.67	5.40	1.65	13.49	6.53	0.87	5.66
5	R	C	9.75	17.55	16.96	12.31	14.88	-1.1179	8.79	4.40	6.59	9.89
Portneuf												
6	I	A	7.67	3.44	2.89	3.08	8.11	25.5672	29.78	12.03	4.01	3.44
8	I	A	9.26	3.46	2.74	3.38	7.37	25.93	28.13	11.78	3.13	4.81
3	R	A	5.41	2.59	2.10	2.27	6.09	22.5227	34.15	14.92	3.89	6.05
5	R	A	2.18	3.38	2.56	2.79	7.03	19.37	36.02	14.78	5.62	6.25
3	R	B	8.88	1.37	0.00	0.00	13.08	26.95	34.10	10.56	2.64	2.41
5	R	B	15.52	3.87	3.12	3.26	9.53	22.47	29.97	7.79	2.13	2.34
3	R	C	17.67	3.29	3.24	3.39	8.68	26.0115	24.91	7.84	1.50	3.46
5	R	C	11.25	5.15	5.02	4.51	9.96	22.57	27.74	9.46	0.98	3.37

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
			<- - - millimeters		- - ->	<- - - - - - - - - - -			microns			- - - - - - - - - - ->
Nansene												
6	I	A	0.55	1.30	3.28	3.97	17.82	28.0600	22.15	13.18	1.97	7.71
8	I	A	0.35	1.92	4.11	4.55	15.87	16.01	33.75	17.52	2.03	3.89
3	R	A	1.03	2.58	5.49	1.57	29.63	10.57	24.42	13.44	5.45	5.84
5	R	A	1.02	2.35	4.77	4.43	12.89	19.69	27.37	16.85	5.34	5.29
3	R	B	1.79	3.38	5.15	4.42	23.96	12.67	25.84	11.63	4.64	6.52
5	R	B	1.80	4.44	4.72	5.21	28.58	9.43	21.74	12.43	4.89	6.76
3	R	C	4.12	4.64	5.61	5.33	15.14	24.47	21.83	10.31	3.07	5.48
5	R	C	1.94	4.49	7.32	5.63	19.11	17.38	27.11	9.50	4.92	2.59
Palouse												
6	I	A	0.84	5.01	9.70	6.03	16.38	10.31	26.84	12.69	5.74	6.47
8	I	A	0.92	7.60	11.46	7.70	11.24	21.3734	19.85	7.72	8.38	3.75
3	R	A	1.42	8.26	9.24	5.50	8.13	23.5500	18.99	15.31	2.47	7.13
5	R	A	1.36	5.05	8.03	7.55	7.21	15.71	27.08	13.51	7.54	6.96
3	R	B	3.81	7.64	6.01	4.40	9.86	11.64	29.37	13.19	5.18	8.90
5	R	B	5.59	9.60	7.87	5.59	8.53	17.15	21.38	12.44	4.08	7.77
3	R	C	7.34	9.33	7.56	4.30	6.02	24.1642	18.01	15.76	2.06	5.44
5	R	C	7.25	10.12	6.07	4.70	7.48	13.06	24.71	15.20	3.80	7.60
Zahl												
6	I	A	1.74	3.30	11.95	27.12	17.86	8.7283	12.12	11.46	2.86	2.86
8	I	A	1.66	3.32	12.52	27.93	16.74	16.40	16.83	4.61	0.00	0.00
3	R	A	1.74	7.69	16.69	16.40	11.66	13.99	4.32	13.19	5.23	9.09
5	R	A	1.81	6.12	17.30	20.50	14.45	6.3389	13.80	12.45	7.24	0.00
3	R	B	6.55	8.11	16.21	23.82	18.78	4.50	10.76	6.89	4.37	0.00
5	R	B	4.03	9.92	17.85	22.07	21.57	4.26	8.38	8.30	2.92	0.71
3	R	C	6.61	7.40	14.56	25.63	17.85	10.5132	4.57	8.45	4.17	0.23
5	R	C	9.65	10.07	14.36	21.88	15.01	7.11	10.13	11.79	0.00	0.00
Pierre												
6	I	A	2.85	14.00	13.90	7.49	9.26	32.9085	5.68	3.75	3.20	6.96
8	I	A	1.69	9.24	10.02	6.38	8.58	34.90	9.08	6.13	4.29	9.69
3	R	A	1.57	7.96	11.10	8.46	9.08	33.2532	6.92	7.42	3.11	11.13
5	R	A	1.63	11.95	14.13	8.53	7.81	28.16	7.83	5.59	4.85	9.51
3	R	B	15.85	23.36	14.46	6.02	6.03	18.94	4.85	3.78	2.14	4.57
5	R	B	10.61	21.76	17.69	8.55	7.42	17.21	5.62	3.91	4.01	3.21
3	R	C	16.72	18.92	12.68	7.13	6.72	21.3197	4.22	4.03	2.93	5.32
5	R	C	15.45	30.70	11.12	5.22	5.58	16.51	5.16	3.72	2.34	4.20
Williams												
6	I	A	2.12	3.92	10.48	15.68	14.09	-139.41	7.56	25.80	-5.12	164.88
8	I	A	1.16	3.31	10.10	16.60	12.96	-135.89	14.19	27.93	-10.18	159.82

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Barnes - ND			<- - - millimeters - - ->			<- - - - - - - - - - - - - - microns - - - - - - - - - - - - - ->						
6	I	A	5.66	8.44	13.77	18.65	18.91	12.1958	7.98	6.67	1.93	5.79
8	I	A	4.99	8.84	16.33	19.32	20.31	16.16	6.76	2.93	0.68	3.68
3	R	A	6.90	10.11	15.02	16.70	15.68	12.7902	8.24	6.55	4.06	3.95
5	R	A	8.71	12.73	15.16	15.31	15.04	3.73	11.39	9.16	3.66	5.10
3	R	B	5.42	6.16	13.69	20.36	18.67	8.92	13.05	6.36	3.68	3.68
5	R	B	5.69	6.46	14.36	21.36	19.59	9.10	10.19	5.19	3.40	4.65
3	R	C	8.80	5.64	12.27	17.67	24.27	10.0585	8.19	6.28	5.19	1.64
5	R	C	3.25	4.44	48.75	10.56	11.03	7.16	7.30	3.55	2.09	1.88
Sverdrup												
6	I	A	3.40	25.07	35.63	16.14	4.46	5.0035	5.78	1.68	0.74	2.10
8	I	A	2.97	26.89	34.51	14.42	4.45	3.80	8.01	2.11	1.58	1.26
3	R	A	6.91	30.96	25.43	10.43	3.97	3.3691	9.47	5.26	1.89	2.31
5	R	A	11.53	26.88	25.79	8.57	3.57	1.64	10.14	6.08	2.61	3.19
3	R	B	3.83	22.70	32.61	16.17	6.03	5.61	7.01	3.82	1.27	0.96
5	R	B	6.68	0.15	40.60	20.83	8.12	6.67	9.82	3.68	1.72	1.72
3	R	C	2.10	21.00	34.21	18.92	5.02	4.8411	5.77	2.78	4.28	1.07
5	R	C	3.24	31.14	34.36	8.28	5.60	3.16	7.11	2.26	0.00	4.85
Barnes - MN												
6	I	A	4.07	7.52	13.95	20.01	16.37	14.3597	13.16	5.54	2.60	2.42
8	I	A	3.41	6.54	13.50	20.80	18.09	14.24	14.20	6.74	0.35	2.13
3	R	A	6.73	16.16	22.30	13.04	8.30	12.0189	12.53	5.49	1.89	1.54
5	R	A	6.71	13.29	17.94	12.96	11.87	9.19	16.86	5.98	1.99	3.22
3	R	B	11.44	12.02	12.37	14.58	13.26	8.69	16.07	6.49	1.93	3.15
5	R	B	11.09	8.23	12.68	17.47	14.29	11.12	14.87	5.34	2.31	2.60
3	R	C	19.15	7.54	11.88	15.38	12.19	14.7292	11.42	4.67	1.45	1.59
5	R	C	16.56	8.45	9.44	13.22	14.79	15.91	13.79	4.74	1.55	1.55
Mexico												
6	I	A	1.33	4.44	7.75	5.48	5.53	37.05	36.84	-3.27	2.03	2.82
10	I	A	1.10	3.58	6.67	5.65	5.39	52.66	13.08	6.42	3.29	2.17
3	R	A	2.67	8.82	8.43	4.80	4.65	42.91	16.41	6.13	2.07	3.11
5	R	A	2.88	9.34	7.68	4.13	4.69	68.82	-1.30	1.85	-0.19	2.10
3	R	C	8.79	2.98	3.45	3.40	4.80	50.41	16.98	8.39	0.82	0.00
5	R	C	5.18	9.45	8.92	5.63	4.78	44.55	14.56	6.05	0.90	0.00
Grenada												
6	I	A	4.47	9.86	7.41	3.94	3.13	21.32	27.65	12.42	4.90	4.90
8	I	A	3.80	7.44	7.04	4.62	3.88	27.17	24.79	11.97	5.25	4.03
3	R	A	9.29	12.57	9.04	5.21	3.79	40.24	6.39	7.85	2.69	2.92
5	R	A	9.57	11.15	8.29	3.80	4.45	15.72	28.26	11.92	4.27	2.58
3	R	B	10.76	5.63	5.22	3.79	3.60	49.87	4.29	6.56	4.39	5.88
5	R	B	7.48	12.37	9.55	4.32	4.04	17.24	23.16	11.69	4.47	5.67

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Grenada			<- - - millimeters - - ->			<- - - - - - - - - - - - - - microns - - - - - - - - - - - - - - ->						
3	R	C	18.21	6.58	7.65	3.58	3.31	13.76	25.12	11.83	4.20	5.74
5	R	C	15.25	5.80	4.32	3.63	4.00	48.91	2.51	6.34	3.52	5.71
Tifton												
6	I	A	3.58	18.23	33.25	17.69	6.36	10.31	2.75	4.05	2.46	1.30
8	I	A	4.66	19.22	34.91	20.16	6.08	6.90	2.52	2.85	1.68	1.01
3	R	A	2.38	4.30	13.20	17.33	10.63	24.87	5.66	11.33	8.24	2.06
5	R	A	5.56	6.36	13.66	16.37	12.45	22.26	7.64	8.07	7.22	0.42
3	R	B	13.46	14.47	27.11	12.27	14.76	16.06	0.79	0.39	0.39	0.29
5	R	B	10.08	20.89	25.52	0.00	13.90	20.51	6.76	2.34	-0.78	0.78
3	R	C	1.39	6.35	25.61	34.23	19.15	8.58	2.61	0.96	0.70	0.43
5	R	C	3.59	10.27	28.69	39.04	10.16	6.46	0.00	1.79	-1.62	1.62
Bonifay												
6	I	A	0.74	5.42	35.48	42.00	11.38	2.50	0.83	0.71	0.67	0.28
8	I	A	1.95	11.67	49.67	28.98	6.60	1.14	0.00	0.00	0.00	0.00
3	R	B	1.23	5.33	35.83	33.62	14.44	5.69	1.72	1.14	0.64	0.36
5	R	B	0.92	3.21	24.62	42.92	16.49	6.61	2.09	1.63	1.11	0.39
3	R	C	0.51	2.96	24.86	45.17	18.26	4.33	1.68	1.26	0.90	0.06
5	R	C	1.36	6.76	33.68	36.39	14.28	4.19	1.48	0.96	0.83	0.06
Cecil												
6	I	A	11.23	17.60	15.29	11.59	7.71	13.90	9.31	3.30	3.68	6.40
8	I	A	18.84	19.16	15.26	11.92	8.58	9.98	4.84	2.92	2.65	5.85
3	R	A	7.92	7.85	6.52	4.71	4.33	21.55	13.00	8.94	6.91	18.28
5	R	A	12.27	17.68	13.71	8.77	5.74	14.61	8.80	5.32	3.89	9.21
3	R	B	20.66	16.94	14.31	11.24	10.29	12.08	7.16	2.97	1.92	2.44
5	R	B	17.27	19.41	15.48	11.98	9.36	12.88	6.13	2.72	1.87	2.89
3	R	C	24.85	25.91	15.65	9.78	7.77	5.40	5.78	1.56	2.19	1.09
5	R	C	22.64	23.29	20.64	10.66	7.18	5.54	4.53	2.26	0.75	2.52
Hiwassee												
6	I	A	14.51	21.49	19.22	9.55	5.12	8.77	5.46	4.85	3.52	7.52
8	I	A	13.21	25.11	19.98	9.53	5.88	9.84	4.57	4.15	2.49	5.23
3	R	A	12.89	20.50	20.68	10.92	6.25	10.10	5.04	4.58	3.32	5.72
5	R	A	14.27	24.57	21.52	9.02	4.72	9.66	4.34	3.86	2.60	5.44
3	R	B	16.83	21.27	19.18	10.94	8.17	9.37	5.09	3.52	1.96	3.68
5	R	B	8.06	16.19	21.64	15.54	11.91	11.42	5.95	2.97	2.52	3.79
3	R	C	14.97	27.01	21.53	11.59	6.93	7.73	4.00	2.83	1.56	1.85
5	R	C	15.56	24.35	22.04	13.46	7.29	7.05	7.85	-4.44	2.62	4.21
Gaston												
6	I	A	7.43	12.45	15.44	13.43	6.89	16.92	8.01	6.73	5.34	7.37
8	I	A	5.57	11.80	14.17	13.51	9.45	18.86	7.55	6.16	4.28	8.68
3	R	A	21.15	11.56	9.52	8.55	4.99	14.82	7.32	6.37	7.01	8.70

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Gaston			<- - - millimeters - - ->			<- - - - - - - - - - - - - - - microns - - - - - - - - - - - - - - - ->						
5	R	A	8.80	13.04	12.04	6.77	4.93	17.53	11.27	10.34	10.19	5.09
3	R	B	20.45	17.17	12.34	10.55	7.66	4.84	9.96	5.80	5.32	5.90
5	R	B	24.54	10.73	12.50	11.45	8.88	3.89	11.99	5.34	4.75	5.93
3	R	C	34.31	11.73	11.71	9.12	7.38	3.37	7.79	4.17	2.96	7.46
5	R	C	33.13	15.87	8.87	9.50	7.12	2.75	9.01	4.58	2.85	6.32
Opequon												
6	I	A	5.65	7.55	10.09	7.80	5.63	9.31	15.15	14.34	9.87	14.61
8	I	A	5.83	9.26	12.89	8.70	7.30	8.01	14.00	13.19	7.06	13.77
3	R	A	7.79	12.78	16.38	7.98	5.79	7.29	11.86	11.44	6.83	11.86
5	R	A	9.01	12.24	14.45	7.94	6.37	8.47	11.53	9.56	7.58	12.85
3	R	B	34.78	5.61	6.04	5.97	6.63	7.38	14.03	7.64	4.58	7.35
5	R	B	17.18	14.52	15.00	9.75	7.11	5.49	12.63	7.37	4.21	6.74
3	R	C	27.56	11.18	10.28	7.80	6.04	7.56	12.36	7.30	3.84	6.08
5	R	C	36.85	8.11	5.45	5.21	5.53	9.06	11.65	6.92	4.22	7.01
Frederick												
6	I	A	4.60	7.79	13.73	11.28	10.11	22.18	15.16	8.08	3.79	3.28
8	I	A	3.88	6.60	11.92	11.49	9.52	23.25	16.95	8.29	4.01	4.10
3	R	A	3.71	8.89	15.21	12.53	5.25	26.52	13.33	7.38	3.53	3.66
5	R	A	3.80	10.72	16.35	11.85	8.75	29.48	6.88	6.11	3.14	2.91
3	R	B	14.46	9.86	12.03	9.92	7.69	21.98	12.26	5.25	2.91	3.64
5	R	B	10.48	11.79	14.73	10.21	7.52	24.42	9.87	5.17	2.62	3.19
3	R	C	13.57	15.02	13.17	9.84	8.68	19.39	9.82	5.61	2.00	2.90
5	R	C	23.89	14.13	11.99	8.59	7.22	18.56	7.72	4.05	1.66	2.18
Manor												
6	I	A	4.93	11.81	17.72	15.50	10.66	14.68	9.27	6.31	3.66	5.45
8	I	A	6.95	10.01	15.95	13.50	11.65	16.84	9.85	6.79	3.36	5.36
3	R	A	6.79	10.49	16.20	13.17	9.86	15.06	10.69	6.82	3.49	7.43
5	R	A	7.50	12.62	15.54	12.69	9.35	16.41	9.63	6.62	3.00	6.62
3	R	B	11.7320	11.18	15.21	13.95	12.99	3.57	13.00	7.09	3.35	7.94
5	R	B	14.5007	9.60	15.28	14.12	10.09	5.11	13.17	7.78	2.74	7.60
3	R	C	17.6254	8.76	12.64	15.02	11.12	3.90	12.25	7.25	3.42	8.01
5	R	C	20.2275	9.34	13.57	15.65	9.47	5.62	11.04	6.06	3.27	5.75
Caribou												
6	I	A	11.41	7.45	10.51	12.45	10.89	20.34	8.42	7.07	5.05	6.40
8	I	A	12.28	7.92	10.30	10.92	9.90	22.82	7.48	6.96	4.78	6.65
3	R	A	12.16	10.83	11.41	9.48	10.10	22.69	7.87	6.64	2.66	6.16
5	R	A	9.66	8.97	13.34	13.71	10.76	21.31	7.94	2.80	7.41	4.09

SEDIMENT SIZE DISTRIBUTION (percent by weight)

Plot	Type	Time	> 1	0.5-1	0.25-0.5	125-250	63-125	32-63	16-32	8-16	4-8	< 4
Caribou			<- - - millimeters - - ->			<- - - - - - - - - - - - - - - microns - - - - - - - - - - - - - - - ->						
3	R	B	17.73	7.98	10.44	11.06	10.87	20.64	7.35	5.42	3.34	5.19
5	R	B	17.90	7.30	9.71	11.39	11.70	20.07	6.86	5.34	3.93	5.80
3	R	C	14.66	8.92	11.47	13.14	13.23	17.28	8.44	5.62	4.22	3.01
5	R	C	15.52	8.44	10.88	11.26	10.96	21.55	7.89	5.16	4.25	4.10
Collamer												
6	I	A	0.62	2.56	5.91	5.48	5.25	50.98	19.04	5.21	1.75	3.20
8	I	A	0.43	1.95	4.45	4.27	6.14	50.36	20.74	6.22	1.98	3.46
3	R	A	0.82	4.64	7.10	6.78	5.53	36.41	25.48	6.67	2.30	4.26
5	R	A	1.74	7.63	9.29	7.34	5.91	32.98	23.60	5.59	2.43	3.49
3	R	B	6.93	12.14	9.57	6.77	8.70	5.90	35.13	7.24	2.43	5.19
5	R	B	7.97	16.53	9.11	5.57	7.54	21.55	20.79	5.29	1.87	3.78
3	R	C	4.62	11.78	8.52	6.33	6.20	27.69	22.36	6.28	1.97	4.25
5	R	C	10.91	12.00	8.21	4.37	5.82	22.79	16.99	8.54	6.02	4.35
Miamian												
6	I	A	16.67	18.37	12.00	10.66	7.23	14.26	9.30	7.79	1.86	1.86
8	I	A	16.03	16.91	13.44	10.49	7.39	13.91	9.55	8.31	1.99	1.99
3	R	A	18.52	20.25	11.96	8.04	6.48	12.07	11.81	6.64	4.22	0.00
5	R	A	23.61	16.70	10.13	9.18	6.61	16.61	6.68	6.27	2.26	1.95
3	R	C	26.66	17.54	14.98	13.83	6.50	8.57	5.06	4.19	1.23	1.44
5	R	C	33.87	12.97	10.23	10.16	8.46	10.38	7.35	3.95	1.39	1.25
Lewisburg												
6	I	A	4.44	10.27	17.51	17.14	11.90	22.64	7.39	4.02	1.87	2.81
8	I	A	5.35	9.52	14.86	17.63	12.48	21.44	8.36	4.88	1.29	4.18
3	R	A	5.11	11.39	18.13	19.71	10.04	19.79	6.72	4.39	1.73	2.99
5	R	A	6.67	11.56	18.00	15.27	9.64	20.63	8.02	4.64	2.11	3.45
3	R	B	13.21	8.70	10.37	16.09	12.12	20.42	8.57	4.68	1.94	3.89
5	R	B	17.52	9.01	10.64	15.28	12.32	17.75	7.07	4.63	1.99	3.79
3	R	C	10.24	8.37	18.12	21.12	11.45	14.83	6.18	3.79	1.57	4.33
5	R	C	20.50	7.85	11.28	13.74	11.06	19.50	7.20	3.82	1.80	3.26
Miami												
6	I	A	6.38	14.80	11.85	5.02	3.88	30.53	18.58	5.35	1.20	2.41
8	I	A	5.66	14.29	10.44	4.71	4.50	30.67	20.50	4.61	2.05	2.56
3	R	A	5.05	13.31	12.45	5.34	4.15	26.96	23.37	5.36	1.76	2.24
5	R	A	11.84	18.24	8.51	2.90	3.27	26.21	20.46	4.35	1.45	2.78
3	R	B	15.53	16.57	11.05	6.29	5.18	21.64	15.72	4.34	1.84	1.84
5	R	B	19.23	14.35	11.57	5.35	4.21	20.85	17.74	3.54	1.24	1.92
3	R	C	13.38	14.71	10.01	6.35	4.55	28.91	13.67	4.18	1.32	2.91
5	R	C	14.80	14.61	14.28	6.30	4.29	19.54	18.21	3.82	1.33	2.82

INTERRILL DATA SOIL: SHARPSBURG DATE: MAY 19, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.20	9.64	4.40	27.41
	37.20	26.63	15.49	34.91
INTENSITY:	42.45	31.38	22.15	42.34
67 mm/hr	47.40	43.71	26.15	35.89
	51.20	48.53	34.02	42.06
	60.00	39.92	27.90	41.94
	65.00	42.52	27.89	39.36
	70.00	50.81	34.56	40.81
	75.00	52.71	34.04	38.74
	80.00	54.67	37.91	41.60
	85.00	54.24	34.21	37.84
	90.00	54.32	35.69	39.42
(2) FLAT	3.10	3.40	0.44	7.82
OPEN	37.00	5.04	1.71	20.32
	42.10	5.18	1.95	22.56
INTENSITY:	47.00	6.08	7.19	70.99
56 mm/hr	50.40	5.15	1.84	21.43
	60.00	6.95	4.60	39.69
	65.00	9.68	9.56	59.29
	70.00	10.51	6.17	35.21
	75.00	16.93	10.06	35.64
	80.00	19.03	11.91	37.56
	85.00	22.46	10.34	27.62
	90.00	29.76	13.00	26.21
	95.00	59.68	36.38	36.58 * *excessive flow rate*

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	3.30	6.18	4.10	39.76
	37.40	29.61	17.31	35.09
INTENSITY:	60.00	39.11	47.72	73.21
64 mm/hr	65.00	49.24	46.69	56.89
	70.00	44.52	40.32	54.35
	75.00	47.60	42.91	54.09
	80.00	51.90	43.81	50.65
	85.00	50.56	39.71	47.13
	90.00	49.99	38.69	46.44
	95.00	57.47	43.21	45.11
(4) FLAT	5.14	3.21	0.61	11.42
COVERED	42.40	2.94	0.33	6.83
	50.38	4.02	0.33	4.92
INTENSITY:	55.41	4.33	0.43	5.93
54 mm/hr	61.12	2.92	0.35	7.16
	66.23	2.88	0.52	10.74
	72.16	6.22	0.74	7.09
	77.31	3.46	0.62	10.79
	82.38	6.15	0.96	9.38
	88.09	7.97	1.25	9.41
	98.13	8.79	0.85	5.79
	107.04	10.81	0.65	3.60

INTERRILL DATA SOIL: SHARPSBURG DATE: MAY 19, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	5.14	2.88	0.54	11.21
OPEN	42.40	4.44	0.87	11.70
	50.45	7.36	2.28	18.60
INTENSITY:	55.54	9.49	3.10	19.60
64 mm/hr	61.26	10.89	3.65	20.10
	66.37	11.28	3.90	20.75
	72.28	13.87	5.99	25.89
	77.51	13.13	5.95	27.20
	82.50	15.07	6.50	25.89
	88.26	16.33	5.84	21.47
	98.34	23.50	9.33	23.83
	107.16	29.98	11.06	22.14
(6) RIDGED	5.14	6.63	5.00	45.29
	42.40	14.74	7.84	31.93
INTENSITY:	50.55	23.78	14.73	37.18
58 mm/hr	56.07	28.02	16.08	34.44
	61.45	27.71	14.24	30.83
	66.47	34.37	21.09	36.81
	72.35	34.04	18.83	33.20
	78.04	38.49	23.24	36.22
	83.03	44.03	25.43	34.65
	88.42	46.84	24.35	31.19
	98.57	37.00	22.41	36.34
	107.31	39.16	23.43	35.89
(7) RIDGED	5.14	5.39	1.50	16.68
	42.40	21.13	13.04	37.04
INTENSITY:	51.03	27.50	16.50	36.01
56 mm/hr	56.20	28.16	20.21	43.07
	62.08	31.85	20.26	38.16
	67.01	37.88	28.11	44.53
	72.42	38.84	25.34	39.14
	78.13	41.65	27.00	38.89
	83.21	45.47	19.65	25.93
	88.51	52.33	24.62	28.23
	99.06	37.43	25.00	40.08
	107.39	15.99	9.93	37.26 *

flow rate unexpectedly low

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	5.14	6.08	1.48	14.57
	42.40	8.16	5.77	42.41
INTENSITY:	51.30	21.36	15.91	44.69
55 mm/hr	57.16	23.28	16.47	42.44
	63.06	24.48	16.02	39.25
	67.42	16.26	10.15	37.48
	73.48	27.37	17.61	38.61
	79.04	33.11	22.14	40.11
	84.07	36.98	24.05	39.02
	90.08	36.53	20.86	34.26
	100.11	36.31	20.98	34.67
	108.29	32.32	18.59	34.52
(9) FLAT	5.14	4.24	0.25	3.48
COVERED	42.40	3.06	0.14	2.81
	51.37	3.39	0.28	5.02
INTENSITY:	57.26	3.14	0.26	4.97
53 mm/hr	63.14	4.07	0.39	5.69
	68.02	5.72	0.76	7.98
	74.05	3.58	0.20	3.29
	79.19	3.38	0.14	2.50
	84.28	3.66	0.25	4.16
	90.22	3.49	0.34	5.82
	102.27	2.94	0.27	5.48
(10) RIDGED	5.14	7.12	4.98	41.99
	42.40	21.10	11.59	32.94
INTENSITY:	51.49	27.96	17.77	38.13
52 mm/hr	57.48	29.25	19.71	40.43
	63.26	34.69	30.54	52.82
	68.14	48.00	30.46	38.07
	74.12	46.29	30.55	39.59
	79.29	49.20	36.44	44.44
	84.43	50.70	31.55	37.34
	90.32	52.65	32.70	37.27
	100.48	50.67	31.48	37.28
	109.05	39.98	25.62	38.45

INTERRILL DATA SOIL: HERSH DATE: MAY 21, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	8.00	12.78	24.59	115.40
	13.00	24.75	60.99	147.87
INTENSITY:	18.00	27.83	44.00	94.87
66 mm/hr	23.00	26.29	41.15	93.91
	28.00	36.94	63.58	103.28
	33.00	36.90	72.26	117.50
	38.00	34.89	68.69	118.13
	43.00	40.85	74.56	109.52
	48.00	44.34	80.82	109.36
	53.00	43.35	183.30	253.68 *
	58.00	42.95	113.56	158.62
	63.00	48.98	138.81	170.04

excessive sediment concentration

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(2) FLAT	8.00	10.28	3.07	17.90
COVERED	13.00	27.26	5.13	11.29
	18.00	10.31	10.35	60.21
INTENSITY:	23.00	13.23	9.35	42.42
62 mm/hr	28.00	14.22	8.89	37.50
	33.00	26.10	19.39	44.56
	38.00	26.31	21.69	49.46
	43.00	27.03	13.62	30.22
	48.00	25.67	23.65	55.28
	53.00	30.71	28.20	55.09
	58.00	46.15	56.54	73.51
	63.00	49.18	71.58	87.33

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	8.00	5.33	4.15	46.74
	13.00	6.44	6.45	60.09
INTENSITY:	18.00	6.24	17.38	167.14
51 mm/hr	23.00	16.73	61.09	219.07
	28.00	16.36	30.12	110.46
	33.00	20.05	38.13	114.10
	38.00	19.24	37.03	115.49
	43.00	29.43	64.66	131.80
	48.00	30.80	73.23	142.63
	53.00	27.90	56.19	120.84
	58.00	28.07	63.14	134.98
	63.00	31.01	69.06	133.63

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	1.30	2.60	0.78	18.05
OPEN	13.06	9.70	4.04	24.96
	18.37	16.12	14.72	54.76
INTENSITY:	23.51	17.97	16.05	53.59
64 mm/hr	29.17	20.63	11.49	33.40
	34.31	35.21	14.81	25.24
	39.53	41.03	29.57	43.24
	47.11	25.16	26.32	62.76
	54.13	56.65	30.92	32.75
	61.02	58.20	30.21	31.14
	68.46	61.59	33.64	32.77

INTERRILL DATA SOIL: HERSH DATE: MAY 21, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	1.48	5.14	0.97	11.34
COVERED	13.12	3.97	1.53	23.06
	18.49	27.72	9.17	19.85
INTENSITY:	24.03	33.83	8.05	14.28
63 mm/hr	29.25	5.23	2.18	25.02
	35.04	29.38	14.95	30.52
	40.01	39.16	12.82	19.64
	47.18	41.79	8.19	11.77
	54.20	45.54	15.82	20.85
	61.08	46.71	4.53	5.82
	68.51	44.17	3.80	5.17
(6) RIDGED	1.57	4.68	5.12	65.63
	13.17	13.82	14.54	63.13
INTENSITY:	19.01	18.04	25.60	85.14
70 mm/hr	24.10	19.59	27.86	85.33
	29.32	19.62	27.69	84.66
	35.15	22.94	32.97	86.26
	40.25	25.20	38.23	91.02
	47.26	34.47	61.18	106.50
	54.27	42.00	65.50	93.57
	61.29	39.64	69.48	105.17
	69.03	41.56	76.64	110.65
(7) RIDGED	2.05	4.95	7.36	89.22
	13.24	4.77	5.39	67.76
INTENSITY:	19.06	11.48	16.75	87.58
62 mm/hr	24.20	15.92	21.16	79.74
	29.38	18.46	22.19	72.13
	35.25	16.74	28.61	102.52
	40.32	23.77	44.44	112.19
	47.37	28.23	30.56	64.95
	54.43	28.05	28.08	60.07
	61.37	26.35	25.42	57.90
	69.11	29.18	26.51	54.51

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	2.28	12.05	18.53	92.28
	13.48	28.92	62.78	130.23
INTENSITY:	19.33	27.59	48.22	104.84
70 mm/hr	24.49	37.71	64.56	102.72
	30.09	37.05	55.85	90.44
	35.53	39.10	55.10	84.56
	41.01	38.13	62.81	98.83
	48.03	43.51	110.09	151.81
	55.25	55.33	114.59	124.25
	62.04	53.23	100.44	113.21
	69.34	61.36	108.31	105.91
(9) FLAT	2.37	3.57	1.43	24.04
OPEN	14.01	15.73	8.86	33.81
	19.42	28.72	9.46	19.77
INTENSITY:	24.56	29.31	7.41	15.17
64 mm/hr	30.18	30.71	6.97	13.62
	36.00	37.34	10.47	16.82
	41.21	43.70	10.88	14.94
	48.17	46.53	26.95	34.75
	55.31	51.51	17.26	20.10
	62.12	50.72	13.50	15.97
	69.40	47.04	18.93	24.14
(10) RIDGED	2.44	7.20	8.98	74.83
	14.05	8.73	8.57	58.92
INTENSITY:	19.47	14.32	18.85	78.98
56 mm/hr	25.01	17.69	22.02	74.69
	30.25	24.31	36.70	90.57
	36.14	23.70	36.29	91.87
	41.30	26.75	42.34	94.95
	48.29	31.60	56.09	106.49
	55.43	31.04	46.98	90.82
	62.21	36.39	64.91	107.03
	69.47	30.25	47.68	94.58

INTERRILL DATA SOIL: KEITH DATE: MAY 23, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.00	32.91	85.78	155.90
	13.00	58.70	100.98	103.00
INTENSITY:	18.00	60.70	87.08	85.90
86 mm/hr	23.00	56.31	77.99	82.93
	28.00	66.47	82.57	74.36
	33.00	60.48	70.73	69.99
	38.00	71.42	83.00	69.58
	43.00	73.21	78.65	64.32
(2) FLAT	3.00	4.94	12.04	142.99
OPEN	13.00	34.08	24.91	43.68
	18.00	39.00	16.61	25.47
INTENSITY:	23.00	64.39	23.02	21.41
72 mm/hr	28.00	54.98	19.68	21.41
	33.00	48.88	16.39	20.05
	38.00	63.49	18.31	17.26
	43.00	71.09	22.40	18.86
(3) RIDGED	3.00	9.95	17.22	102.76
	13.00	45.45	114.61	150.88
INTENSITY:	18.00	49.70	99.58	119.91
63 mm/hr	23.00	51.55	95.25	110.59
	28.00	45.72	76.29	99.77
	33.00	50.08	86.33	103.10
	38.00	51.73	80.13	92.66
	43.00	45.90	62.83	81.85

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	2.31	3.36	2.38	41.08
COVERED	9.36	5.64	2.48	25.67
	16.00	9.19	2.37	15.21
INTENSITY:	22.35	23.66	3.47	8.74
64 mm/hr	29.37	13.60	2.64	11.51
	36.55	51.79	5.37	6.20
	43.55	56.80	2.18	2.29
(5) FLAT	2.37	3.99	5.02	73.17
OPEN	9.44	47.65	32.33	40.57
	16.04	50.39	28.16	33.42
INTENSITY:	22.43	56.87	26.04	27.39
53 mm/hr	29.45	41.86	17.47	24.95
	37.01	51.72	20.84	24.11
	44.10	31.99	14.61	27.26
(6) RIDGED	2.45	0.73	2.08	145.91
	9.54	40.06	54.62	81.46
INTENSITY:	16.14	43.06	57.42	79.69
62 mm/hr	22.54	38.29	48.30	75.31
	29.52	39.13	46.78	71.44
	37.08	41.00	45.08	65.74
	44.18	42.32	47.45	67.00

INTERRILL DATA SOIL: KEITH DATE: MAY 23, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(7) RIDGED	2.52	16.44	29.72	107.70
	10.01	58.63	106.84	109.01
INTENSITY:	16.19	60.55	92.46	91.38
56 mm/hr	23.03	61.20	77.06	75.31
	29.02	42.19	48.37	68.62
	37.16	61.78	65.83	63.79
	44.25	64.18	60.56	56.47
(8) RIDGED	3.17	17.89	21.41	71.35
	10.21	42.40	60.56	85.39
INTENSITY:	16.45	48.11	69.77	86.76
63 mm/hr	23.24	50.90	63.15	74.21
	30.30	48.78	51.20	62.80
	38.04	53.07	75.42	85.01
	44.56	50.49	55.01	65.21

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(9) FLAT	3.24	4.12	1.27	17.94
COVERED	10.28	4.17	1.18	16.31
	16.52	5.25	1.10	12.26
INTENSITY:	23.22	3.31	0.79	13.67
66 mm/hr	30.38	4.14	0.92	12.96
	38.11	44.11	3.81	5.16
	45.13	0.36	0.50	59.64
(10) RIDGED	3.36	3.94	3.77	55.83
	10.36	51.96	52.50	60.44
INTENSITY:	17.04	55.91	56.20	60.15
64 mm/hr	23.41	56.51	53.46	56.59
	30.47	56.71	52.03	54.92
	38.18	58.15	50.65	52.13
	45.22	57.22	45.79	47.90

INTERRILL DATA SOIL: AMARILLO DATE: MAY 28, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	11.00	24.33	47.27	116.56
	14.00	24.53	53.50	130.86
INTENSITY:	18.00	44.63	85.96	115.57
60 mm/hr	23.00	15.34	29.50	115.40
	29.00	46.25	72.36	93.87
	33.00	37.27	56.31	90.64
	38.00	37.88	49.81	78.89
	43.00	31.10	33.58	64.78
	48.00	45.58	61.16	80.51
	53.00	44.95	63.09	84.21
(2) FLAT	11.00	54.41	58.51	64.51
OPEN	14.00	33.55	21.39	38.25
	18.00	49.34	21.66	26.34
INTENSITY:	23.00	40.86	17.19	25.25
52 mm/hr	29.00	41.75	17.87	25.68
	33.00	36.06	55.50	92.34
	38.00	36.51	22.02	36.18
	43.00	36.58	24.05	39.46
	48.00	42.97	19.72	27.54
	53.00	45.28	22.26	29.50

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(3) RIDGED	11.00	49.39	163.98	199.22
	14.00	31.03	97.78	189.08
INTENSITY:	18.00	41.79	138.68	199.09
66 mm/hr	23.00	41.97	121.11	173.12
	29.00	41.42	97.70	141.53
	33.00	35.29	95.63	162.59
	38.00	42.70	141.65	199.03
	43.00	38.58	94.33	146.69
	48.00	35.69	70.37	118.29
	53.00	36.39	111.64	184.06
(4) FLAT	4.12	2.83	10.06	213.10
COVERED	11.40	7.63	3.77	29.66
	18.06	8.33	1.27	9.15
INTENSITY:	25.00	3.29	1.96	35.80
53 mm/hr	31.58	1.65	0.99	35.96
	39.09	1.58	0.87	32.83
	46.03	28.84	2.37	4.93

INTERRILL DATA SOIL: AMARILLO DATE: MAY 28, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	4.19	1.14	0.33	17.46
OPEN	11.45	14.69	4.35	17.75
	18.15	14.90	2.84	11.42
INTENSITY:	25.06	40.39	16.04	23.83
64 mm/hr	32.05	29.21	11.35	23.31
	39.13	30.30	8.13	16.09
	46.08	37.35	12.47	20.03
(6) RIDGED	4.35	1.85	0.92	29.68
	11.52	35.22	46.59	79.38
INTENSITY:	18.19	47.94	42.92	53.71
69 mm/hr	25.12	51.85	65.96	76.32
	32.12	38.15	44.59	70.13
	39.21	38.12	43.90	69.11
	46.16	48.44	77.50	95.99
(7) RIDGED	4.43	1.92	3.48	108.75
	11.58	24.24	32.06	79.35
INTENSITY:	18.24	37.02	36.74	59.55
72 mm/hr	25.21	51.17	59.60	69.89
	32.18	44.78	61.25	82.07
	39.27	45.76	63.50	83.27
	46.28	33.27	38.84	70.05

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	5.09	3.74	3.02	48.42
	12.15	43.06	59.86	83.40
INTENSITY:	18.43	50.90	68.87	81.19
56 mm/hr	25.39	50.90	71.71	84.54
	32.44	39.70	51.52	77.87
	47.16	45.26	69.57	92.23
(9) FLAT	5.13	1.56	0.83	32.05
COVERED	12.20	5.02	10.70	127.93
	18.49	4.18	1.75	25.07
INTENSITY:	25.46	1.95	0.62	19.01
51 mm/hr	32.52	1.60	0.59	22.22
	40.02	2.93	0.62	12.69
	47.24	19.01	4.01	12.67
(10) RIDGED	5.19	0.69	0.83	71.75
	12.33	31.35	32.24	61.69
INTENSITY:	18.56	41.79	51.02	73.24
60 mm/hr	25.52	44.06	64.89	88.36
	32.57	43.44	73.22	101.12
	40.16	45.45	75.60	99.80
	47.28	48.78	88.27	108.56

INTERRILL DATA SOIL: WOODWARD DATE: JUNE 1, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.00	6.90	8.32	72.32
	7.00	10.10	18.15	107.80
INTENSITY:	15.00	30.46	96.11	189.32
73 mm/hr	20.00	37.60	118.31	188.81
	25.00	42.91	122.57	171.37
	30.00	46.71	129.07	165.79
	35.00	47.28	127.45	161.75
	40.00	45.09	128.36	170.79
	45.00	52.05	149.10	171.86
	50.00	51.39	174.50	203.73
	56.00	47.22	153.43	194.95
(2) FLAT	3.00	2.75	1.08	23.63
OPEN	7.00	2.76	1.31	28.44
	15.00	15.15	9.11	36.08
INTENSITY:	20.00	30.93	17.13	33.23
66 mm/hr	25.00	37.19	15.74	25.40
	30.00	42.93	15.55	21.73
	35.00	43.11	15.17	21.12
	40.00	45.27	14.42	19.11
	45.00	52.44	21.24	24.30
	50.00	55.23	24.21	26.31
	56.00	50.41	17.95	21.37

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	3.00	6.34	10.08	95.36
	7.00	8.48	17.08	120.79
INTENSITY:	15.00	28.91	80.76	167.59
66 mm/hr	20.00	32.97	79.06	143.87
	25.00	40.50	84.34	124.93
	30.00	41.11	87.37	127.51
	35.00	41.61	92.89	133.94
	40.00	40.49	88.38	130.96
	45.00	35.09	72.77	124.43
	50.00	38.23	83.78	131.47
	56.00	43.90	83.31	113.86
(4) FLAT	0.32	1.71	1.02	35.87
COVERED	7.21	5.41	2.76	30.56
	14.07	15.42	7.65	29.77
	20.57	11.35	2.01	10.62
Spilled Sample *	27.50			
	30.30	42.55	8.45	11.92
INTENSITY:	35.05	43.39	4.98	6.89
62 mm/hr	44.30	42.68	7.05	9.91
	50.11	40.47	3.94	5.85
	57.43	45.88	4.52	5.91

INTERRILL DATA SOIL: WOODWARD DATE: JUNE 1, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	0.36	2.91	1.87	38.47
OPEN	7.26	4.17	2.92	42.08
	14.16	6.33	5.21	49.38
INTENSITY:	21.07	24.30	8.77	21.65
60 mm/hr	28.03	35.72	13.73	23.06
	35.11	12.08	3.19	15.84 *
	42.18	34.48	12.36	21.51
	50.31	43.47	13.88	19.15
	57.57	45.96	16.27	21.25
	runoff leaking under trough			
(6) RIDGED	0.42	3.33	5.44	97.86
	7.33	6.00	7.52	75.19
INTENSITY:	14.22	13.78	16.63	72.43
57 mm/hr	21.14	20.53	28.18	82.37
	28.11	30.55	52.69	103.50
	35.19	33.19	52.64	95.16
	42.26	31.61	54.48	103.41
	50.36	36.90	70.19	114.12
	58.07	34.93	56.78	97.54
(7) RIDGED	0.47	4.32	7.36	102.18
	7.39	6.49	12.75	117.89
INTENSITY:	14.30	10.32	12.56	73.03
60 mm/hr	21.34	19.70	65.30	198.89
	28.16	27.87	47.00	101.17
	35.26	32.88	58.91	107.50
	42.35	35.64	73.24	123.30
	50.44	36.55	69.02	113.30
	58.12	35.60	59.31	99.96

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	1.07	4.99	2.33	27.99
	8.04	6.19	5.82	56.38
INTENSITY:	14.59	15.11	16.98	67.41
62 mm/hr	22.03	23.92	57.41	144.00
	28.42	32.51	42.09	77.68
	35.56	26.20	36.32	83.18
	43.10	36.65	54.15	88.65
	51.10	38.37	58.64	91.70
	58.34	34.02	44.12	77.82
(9) FLAT	1.13	2.64	0.86	19.48
COVERED	8.10	3.92	1.34	20.59
	15.11	3.49	1.24	21.40
INTENSITY:	22.12	9.62	3.57	22.25
62 mm/hr	28.49	11.15	3.40	18.27
	36.06	22.49	8.63	23.02
	43.19	33.02	4.01	7.28
	51.27	46.92	3.21	4.11
	58.47	45.81	2.44	3.19
(10) RIDGED	1.16	4.63	5.77	74.73
	8.17	5.97	5.67	56.95
INTENSITY:	15.17	12.08	16.67	82.82
60 mm/hr	22.22	20.96	31.53	90.25
	28.57	27.64	39.22	85.13
	36.20	32.58	49.18	90.57
	43.25	35.27	60.90	103.58
	51.35	41.01	74.06	108.35
	58.53	33.09	53.47	96.94

INTERRILL DATA SOIL: HEIDEN DATE: JUNE 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.00	3.15	1.26	23.98
	12.00	2.40	0.62	15.54
	17.00	5.22	2.27	26.03
Spilled Sample *	22.00			
	27.00	59.90	13.10	13.12
INTENSITY:	32.00	57.06	13.82	14.54
60 mm/hr	37.00	59.65	14.57	14.66
	42.00	52.00	13.37	15.42
	47.00	44.37	13.28	17.96
	52.00	43.90	12.46	17.03
	57.00	44.24	13.59	18.43
	67.00	46.39	14.66	18.95
(2) FLAT	3.00	2.26	0.53	14.18
OPEN	12.00	2.19	0.63	17.33
	17.00	2.30	0.70	18.29
INTENSITY:	22.00	2.77	0.90	19.46
61 mm/hr	27.00	2.93	0.96	19.69
	32.00	8.40	2.41	17.21
	37.00	9.95	5.79	34.91
	42.00	23.03	6.37	16.59
	47.00	30.10	8.58	17.09
	52.00	38.77	10.36	16.03
	57.00	45.99	13.73	17.91
	62.00	43.49	10.66	14.70

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	3.00	4.90	2.49	30.45
	12.00	5.38	2.81	31.33
INTENSITY:	17.00	5.20	2.09	24.11
66 mm/hr	22.00	29.28	21.65	44.37
	25.00	29.99	12.88	25.76
	32.00	49.39	17.16	20.85
	37.00	50.98	18.98	22.33
	42.00	55.73	26.91	28.97
	47.00	57.66	29.89	31.10
	52.00	51.25	27.82	32.57
	57.00	45.46	26.72	35.27
	62.00	48.95	24.84	30.45
(4) FLAT	2.31	2.33	0.46	11.90
COVERED	11.28	2.37	0.39	9.77
	16.33	2.54	0.49	11.48
INTENSITY:	23.41	2.34	0.56	14.26
61 mm/hr	30.27	2.67	0.76	17.01
	37.30	2.75	1.01	22.06
	44.30	2.84	0.69	14.66
	51.23	3.09	0.96	18.66
	58.35	5.73	1.46	15.25
	65.28	6.99	3.44	29.53

INTERRILL DATA SOIL: HEIDEN DATE: JUNE 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	2.38	4.56	0.98	12.91
OPEN	9.38	4.61	1.45	18.91
	16.42	9.05	3.83	25.35
INTENSITY:	23.47	44.43	13.05	17.62
64 mm/hr	30.34	67.19	18.29	16.34
	37.34	38.95	11.91	18.35
	44.36	46.37	14.44	18.68
	51.29	51.10	18.61	21.85
	58.41	61.64	25.01	24.35
	65.35	60.61	23.62	23.39
(6) RIDGED	2.44	4.45	1.31	17.70
	9.50	4.61	1.03	13.43
INTENSITY:	16.50	5.24	2.73	31.26
52 mm/hr	23.55	34.24	29.00	50.82
	30.39	54.39	11.13	12.27
	37.42	53.80	13.27	14.80
	44.42	39.22	13.59	20.80
	51.34	40.84	16.73	24.58
	58.47	42.63	20.06	28.23
	65.40	45.45	21.36	28.20
(7) RIDGED	2.50	3.92	1.14	17.44
	9.58	4.18	0.88	12.61
INTENSITY:	17.04	4.16	1.02	14.72
54 mm/hr	24.03	7.12	4.92	41.42
	30.46	8.67	6.70	46.37
	38.06	30.15	28.47	56.66
	44.48	44.10	22.34	30.39
	51.45	42.18	18.27	25.99
	58.54	41.83	18.46	26.48
	65.47	43.80	21.39	29.30

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	3.23	2.13	0.58	16.45
	10.32	2.49	0.73	17.61
INTENSITY:	17.38	2.42	0.64	15.77
61 mm/hr	24.41	2.46	0.70	17.11
	31.10	2.47	0.83	20.26
	38.40	5.11	2.16	25.38
	45.24	7.07	3.74	31.73
	52.16	9.76	3.04	18.70
	59.23	13.56	4.28	18.92
	66.09	26.21	6.18	14.15

Entire set not used because of low runoff rate. Possibly due to a thinner A horizon on this plot.

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	3.45	2.48	0.55	13.34
COVERED	10.41	2.58	0.53	12.42
	17.51	2.48	0.57	13.86
INTENSITY:	24.49	2.62	0.66	15.02
60 mm/hr	31.17	2.23	0.69	18.47
	38.52	2.51	0.63	15.07
	45.29	2.73	0.62	13.51
	52.23	2.55	0.62	14.62
	59.41	4.34	2.33	32.22
	66.16	3.19	0.55	10.34
(10) RIDGED	4.02	3.81	1.81	28.54
	10.50	4.41	0.91	12.33
INTENSITY:	18.06	11.57	1.68	8.73
58 mm/hr	24.55	45.79	5.67	7.43
	31.23	39.63	15.98	24.19
	39.09	48.89	7.69	9.43
	45.43	58.82	7.58	7.73
	52.35	58.77	14.50	14.80
	59.49	60.72	15.81	15.62
	66.22	70.89	19.04	16.12

INTERRILL DATA SOIL: WHITNEY DATE: JUNE 29, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l	Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	1.00	4.10	1.69	24.74	(3) RIDGED	1.00	4.20	2.44	34.78
	11.00	15.26	17.81	70.06		11.00	18.66	12.14	39.05
INTENSITY:	16.00	21.53	18.18	50.66	INTENSITY:	16.00	21.47	29.28	81.83
59 mm/hr	21.00	27.03	21.84	48.48	63 mm/hr	21.00	34.83	41.57	71.62
	26.00	35.52	26.70	45.10		26.00	37.49	46.63	74.63
	32.00	30.26	25.47	50.49		32.00	42.05	39.94	56.98
	36.00	35.10	31.84	54.42		36.00	44.25	43.95	59.59
	41.00	39.37	35.06	53.43		41.00	45.37	42.74	56.52
	46.00	36.96	31.24	50.72		46.00	49.09	45.17	55.21
	51.00	40.17	31.70	47.35		51.00	47.86	43.45	54.46
	56.00	36.42	32.36	53.32		56.00	46.72	42.42	54.48
(2) FLAT	1.00	2.04	0.52	15.14	(4) FLAT	8.47	2.44	1.08	26.58
OPEN	11.00	2.12	0.70	19.83	COVERED	19.18	2.49	0.94	22.51
	16.00	26.98	9.99	22.22		28.04	2.49	0.95	22.96
INTENSITY:	21.00	34.61	13.58	23.55	INTENSITY:	34.48	2.96	0.82	16.68
63 mm/hr	26.00	39.09	16.77	25.74	59 mm/hr	41.41	3.10	1.14	21.97
	32.00	41.59	17.18	24.79		48.37	3.21	0.83	15.57
	36.00	39.91	15.38	23.12		58.07	3.14	0.94	18.08
	41.00	41.26	14.50	21.08		66.14	3.36	1.00	17.91
	46.00	43.16	19.85	27.59					
	51.00	42.97	18.86	26.33					
	56.00	42.85	19.32	27.05					

INTERRILL DATA SOIL: WHITNEY DATE: JUNE 29, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	8.51	2.51	0.70	16.66
Spilled Sample *	19.24			
	28.11	23.70	8.90	22.53
OPEN	34.56	41.17	9.86	14.37
	41.47	42.16	7.42	10.56
INTENSITY:	48.42	47.03	8.65	11.04
70 mm/hr	58.28	50.67	10.21	12.08
	66.18	47.67	8.86	11.15
(6) RIDGED	9.57	5.11	2.63	30.89
	19.31	11.42	15.20	79.82
INTENSITY:	28.19	25.91	37.82	87.59
65 mm/hr	35.03	36.33	39.25	64.82
	41.56	39.40	37.94	57.77
	48.48	40.91	45.05	66.07
	58.32	50.81	54.13	63.91
	66.28	36.53	39.26	64.49
(7) RIDGED	9.02	5.57	3.85	41.52
	19.40	20.57	29.04	84.72
INTENSITY:	28.26	26.42	35.39	80.36
60 mm/hr	35.15	33.28	47.98	86.50
	42.06	39.00	57.57	88.58
	48.52	35.64	47.72	80.34
	58.37	51.27	65.60	76.78
	66.33	41.64	52.31	75.37

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	9.26	4.35	2.39	32.95
	21.48	20.90	35.04	100.57
INTENSITY:	29.01	27.21	36.13	79.67
62 mm/hr	35.36	33.00	39.68	72.15
	42.31	39.99	48.20	72.32
	49.12	36.46	42.75	70.35
	58.42	40.06	42.36	63.45
	66.40	33.59	32.29	57.67
(9) FLAT	9.31	4.73	0.68	8.60
COVERED	20.21	5.34	0.89	9.97
	29.07	3.97	0.58	8.69
INTENSITY:	35.41	8.09	1.24	9.20
68 mm/hr	42.37	5.09	0.86	10.13
	49.18	4.52	0.72	9.59
	58.47	4.58	0.58	7.64
	66.56	5.03	0.41	4.93
(10) RIDGED	9.36	5.25	3.85	43.96
	20.30	18.59	26.76	86.36
INTENSITY:	29.15	29.50	42.93	87.31
60 mm/hr	35.77	39.87	54.76	82.40
	42.41	47.23	58.20	73.94
	49.23	51.21	61.09	71.58
	58.53	62.84	47.44	45.30
	67.02	63.76	53.39	50.24

INTERRILL DATA SOIL: ACADEMY DATE: JUNE 30, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	11.00	12.93	8.84	40.99
	14.00	28.92	25.94	53.82
INTENSITY:	19.00	39.06	38.35	58.91
65 mm/hr	24.00	40.22	38.86	57.98
	29.00	46.27	47.39	61.46
	34.00	48.00	48.92	61.14
	39.00	47.25	46.57	59.14
	44.00	48.48	49.89	61.74
	49.00	50.35	51.61	61.50
	54.00	48.14	46.78	58.31
	59.00	48.71	47.27	58.23
(2) FLAT	9.00	6.27	3.59	34.36
OPEN	14.00	34.19	18.28	32.08
	19.00	45.32	16.23	21.49
INTENSITY:	24.00	41.92	13.24	18.95
59 mm/hr	29.00	43.14	12.19	16.96
	34.00	47.62	14.27	17.98
	39.00	44.79	13.09	17.53
	44.00	43.56	12.27	16.90
	49.00	43.86	12.21	16.71
	54.00	46.69	13.33	17.13
	59.00	46.69	12.58	16.17

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(3) RIDGED	9.00	17.51	34.35	117.71
	14.00	35.23	60.66	103.32
INTENSITY:	19.00	46.23	75.84	98.43
60 mm/hr	24.00	43.57	61.91	85.25
Bad Sample *	29.00	0.11	3.79	2040.23
	34.00	48.31	54.58	67.79
	39.00	45.98	49.72	64.88
	44.00	47.79	48.16	60.47
	49.00	46.85	46.47	59.52
	54.00	49.98	47.68	57.24
	59.00	49.12	47.86	58.46
(4) FLAT	9.41	1.11	0.66	35.73
COVERED	16.44	0.74	0.45	36.14
	23.32	0.81	0.48	35.44
INTENSITY:	30.15	0.59	0.46	46.85
59 mm/hr	38.07	2.16	0.63	17.46
	44.55	0.42	0.42	60.07
	51.57	0.57	0.44	45.80
	59.33	0.83	0.44	31.99

INTERRILL DATA SOIL: ACADEMY DATE: JUNE 30, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	9.47	3.57	2.30	38.69
OPEN	16.50	40.54	23.08	34.16
	23.40	56.32	21.98	23.41
INTENSITY:	30.21	47.62	17.14	21.59
65 mm/hr	38.16	51.37	15.89	18.57
	45.09	50.31	18.62	22.21
	52.03	46.71	18.30	23.51
	59.41	51.26	17.50	20.48
(6) RIDGED	9.56	11.74	17.01	86.94
	17.05	26.07	30.50	70.19
INTENSITY:	23.48	35.41	37.06	62.79
54 mm/hr	30.30	37.39	39.57	63.50
	38.39	46.76	93.83	120.38 *
	45.16	44.83	43.05	57.63
	52.09	40.94	35.88	52.59
	59.48	48.61	39.85	49.19
	concentration is excessive			
(7) RIDGED	10.02	7.70	6.99	54.50
	17.12	34.04	30.92	54.51
INTENSITY:	23.59	26.86	21.67	48.40
56 mm/hr	30.50	28.12	28.74	61.33
	38.51	29.66	26.68	53.97
	45.24	29.02	24.45	50.55
	52.18	29.01	26.74	55.31
	59.55	29.76	27.49	55.43

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	10.32	9.52	8.33	52.46
	17.37	33.16	36.52	66.07
INTENSITY:	25.38	41.62	50.83	73.29
56 mm/hr	31.16	49.67	58.31	70.44
	39.12	48.15	54.31	67.67
	46.11	47.90	57.75	72.35
	52.50	52.21	59.56	68.45
	60.17	51.37	53.92	62.98
(9) FLAT	10.39	4.80	1.66	20.72
COVERED	17.49	5.98	1.38	13.80
	24.31	6.30	1.22	11.60
INTENSITY:	31.26	7.42	1.16	9.39
59 mm/hr	39.22	7.81	0.98	7.49
	46.19	7.56	0.70	5.59
	53.01	7.59	0.79	6.21
	60.23	7.74	0.80	6.20
(10) RIDGED	10.48	7.53	9.89	78.78
	17.57	32.30	30.36	56.40
INTENSITY:	24.40	39.12	36.65	56.21
63 mm/hr	31.35	46.27	45.23	58.65
	39.32	44.08	40.90	55.67
	46.26	46.90	45.19	57.81
Spilled Sample *	53.08			
	60.33	47.60	40.77	51.39

INTERRILL DATA SOIL: LOS BANOS DATE: JULY 1, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	2.00	10.03	7.67	45.40
	11.00	19.69	12.48	37.83
INTENSITY:	16.00	27.54	26.78	58.13
64 mm/hr	21.15	32.60	30.48	55.92
	26.00	37.49	35.95	57.37
	31.00	37.65	35.83	56.94
	36.00	47.14	40.95	51.98
	41.00	49.01	45.06	55.02
	46.00	54.79	40.95	44.74
	51.00	51.93	40.01	46.12
	56.00	52.69	35.91	40.80
	61.00	3.55	0.84	13.74 *
		insufficient runoff		
(2) FLAT	2.00	2.48	0.36	8.24
OPEN	11.00	4.18	1.40	19.55
	16.00	11.84	3.58	17.99
INTENSITY:	21.15	22.18	13.16	35.44
64 mm/hr	26.00	25.64	14.50	33.78
	31.00	42.00	17.71	25.23
	36.00	34.06	15.99	28.06
	41.00	31.37	15.35	29.24
	46.00	36.33	17.43	28.68
	51.00	45.16	18.42	24.41
	56.00	45.72	18.45	24.15
	61.00	52.97	21.07	23.80

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	2.00	4.57	0.78	10.04
	11.00	10.24	8.55	49.60
INTENSITY:	16.00	23.12	23.88	61.70
68 mm/hr	21.15	38.04	41.42	65.16
	26.00	46.80	47.84	61.20
	31.00	50.44	48.20	57.21
	36.00	55.84	56.39	60.45
	41.00	53.41	41.78	46.83
	46.00	55.97	43.20	46.20
	51.00	57.69	43.95	45.60
	56.00	53.36	40.39	45.31
	61.00	55.72	36.76	39.49
(4) FLAT	1.36	1.84	0.58	17.83
COVERED	8.47	4.29	1.04	14.17
	16.06	4.77	0.93	11.33
INTENSITY:	23.21	4.64	1.01	12.73
43 mm/hr	30.44	4.53	0.86	11.16
	37.45	4.65	0.74	9.28
	44.38	3.99	0.66	9.53
	54.09	4.87	1.08	12.93
	59.13	5.45	0.79	8.54
	66.15	3.57	0.51	8.30

INTERRILL DATA SOIL: LOS BANOS DATE: JULY 1, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	1.43	1.13	0.33	15.81
OPEN	8.53	1.41	3.12	122.75
	16.12	5.13	0.57	6.48
INTENSITY:	23.30	3.71	1.21	19.05
51 mm/hr	31.03	28.99	6.46	13.32
	38.04	33.08	10.56	19.06
	44.47	23.91	9.71	24.22
	52.13	36.18	10.52	17.38
	59.35	39.74	11.16	16.81
	67.10	38.45	10.13	15.74
(6) RIDGED	1.48	3.19	0.76	13.74
	9.10	3.90	0.83	12.38
INTENSITY:	16.22	7.18	6.85	56.52
51 mm/hr	23.40	19.79	17.08	51.50
	31.12	29.68	28.67	57.72
	38.15	20.36	17.42	51.08
	44.58	34.52	30.86	53.42
	52.20	25.30	21.54	50.88
	59.43	37.03	31.95	51.63
	67.22	40.46	29.76	43.94
(7) RIDGED	1.54	3.36	0.51	8.89
	9.16	10.05	7.33	43.23
INTENSITY:	16.31	26.41	22.77	51.51
61 mm/hr	23.51	33.92	42.13	74.29
	31.22	35.35	35.73	60.44
	38.24	41.58	40.92	58.82
	45.09	42.73	39.77	55.66
	52.26	42.77	41.10	57.46
	60.30	43.48	33.86	46.60
	67.30	44.28	35.58	48.03

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	2.21	3.96	0.84	12.38
	9.43	5.39	2.40	26.18
INTENSITY:	16.59	20.42	22.84	66.80
50 mm/hr	24.27	27.89	30.90	66.24
	32.03	33.53	38.80	69.18
	38.55	31.48	33.62	63.81
	45.53	35.81	37.04	61.83
	52.54	35.52	30.81	51.84
	61.10	39.06	33.65	51.56
	68.05	38.53	31.17	48.34
(9) FLAT	2.30	3.88	0.24	3.67
COVERED	9.53	5.25	0.77	8.65
	17.11	6.11	1.05	10.19
INTENSITY:	24.42	6.87	1.72	14.82
51 mm/hr	32.15	6.48	0.28	2.56
	39.06	6.06	2.01	19.50
	46.05	8.72	4.12	27.93
	53.20	6.08	3.98	38.36
	61.25	8.30	3.93	28.05
	68.19	6.89	1.00	8.53
(10) RIDGED	2.38	4.95	1.90	22.50
	10.01	8.93	4.03	26.68
INTENSITY:	17.20	30.62	18.45	36.00
52 mm/hr	24.53	33.61	36.40	64.79
	32.27	53.70	45.59	50.79
	39.18	38.29	30.62	47.84
	46.16	35.13	26.28	44.75
	61.40	45.86	30.45	39.75
	68.31	29.42	18.92	38.45

INTERRILL DATA SOIL: PORTNEUF DATE: JULY 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	3.00	4.48	7.16	95.73
	18.00	8.26	7.08	51.46
INTENSITY:	23.00	16.33	11.67	42.89
54 mm/hr	28.00	21.62	11.47	31.83
	33.30	26.00	11.89	27.45
	38.00	29.07	11.27	23.26
	43.00	30.77	11.07	21.58
	48.00	30.12	10.89	21.69
	68.00	33.86	12.58	22.29
	73.00	34.28	13.41	23.47
	78.00	34.18	14.26	25.03
	83.00	37.16	15.38	24.83
(2) FLAT	3.00	2.09	0.99	28.29
OPEN	18.00	2.49	0.35	8.37
	23.00	2.80	0.31	6.66
INTENSITY:	28.00	12.75	3.04	14.30
59 mm/hr	33.30	20.57	5.06	14.76
	38.00	25.50	6.21	14.62
	43.00	27.09	5.69	12.60
	48.00	29.52	6.47	13.15
	68.00	32.45	6.62	12.24
	73.00	34.66	7.29	12.62
	78.00	34.38	6.91	12.05
	83.00	34.86	7.16	12.33

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(3) RIDGED	3.00	4.50	6.16	82.19
	18.00	5.33	4.81	54.10
INTENSITY:	23.00	9.85	7.32	44.62
59 mm/hr	28.00	15.26	9.36	36.81
	33.30	19.67	13.04	39.77
	38.00	21.51	11.23	31.32
	43.00	21.87	10.76	29.53
	48.00	24.10	10.49	26.11
	68.00	32.16	17.61	32.86
	73.00	34.53	17.60	30.58
	78.00	35.53	18.42	31.11
	83.00	36.48	18.72	30.79
(4) FLAT	3.36	4.47	5.02	67.36
COVERED	10.24	3.93	0.91	13.84
	17.01	4.26	0.59	8.36
INTENSITY:	23.53	6.02	0.88	8.75
61 mm/hr	30.42	7.87	0.73	5.55
	37.47	8.30	0.62	4.51
	45.21	8.25	0.59	4.29
	52.22	17.52	0.82	2.82
	59.54	22.25	0.86	2.33
	66.58	18.68	0.66	2.11
	74.02	24.66	0.87	2.12
	81.08	29.27	2.08	4.26

INTERRILL DATA SOIL: PORTNEUF DATE: JULY 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	3.41	3.02	1.02	20.38
OPEN	10.31	2.41	0.69	17.24
	17.09	2.88	0.63	13.02
INTENSITY:	23.58	3.06	0.79	15.60
69 mm/hr	30.48	3.67	0.82	13.48
	37.52	8.13	2.79	20.60
	45.26	11.31	3.47	18.41
	52.27	15.32	3.61	14.15
	59.59	26.56	4.80	10.84
	67.06	25.79	5.01	11.67
	64.08	26.62	5.02	11.33
	81.14	27.59	5.19	11.28
(6) RIDGED	3.48	2.23	0.61	16.41
	10.38	5.17	4.01	46.61
INTENSITY:	17.15	5.60	2.70	28.94
51 mm/hr	24.06	6.12	3.21	31.48
	30.55	11.11	6.69	36.14
	37.58	15.25	6.51	25.60
	45.32	16.42	6.55	23.94
	52.34	20.38	9.42	27.74
	60.08	25.12	10.68	25.51
	67.14	13.33	13.34	60.04
	64.15	31.45	13.11	25.01
	81.20	32.86	14.58	26.63
(7) RIDGED	3.54	4.20	6.40	91.53
	10.44	4.86	4.88	60.18
INTENSITY:	17.22	5.03	4.61	55.02
47 mm/hr	24.15	6.16	5.09	49.55
	31.04	9.50	7.32	46.21
	38.05	13.68	9.91	43.46
	45.38	18.19	1.38	4.56
	52.42	25.07	15.92	38.08
	60.14	26.35	15.21	34.64
	67.22	26.05	13.05	30.05
	74.23	31.68	17.01	32.22
	81.27	32.68	17.33	31.83

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	4.14	4.33	3.80	52.63
	11.08	4.98	2.49	29.98
INTENSITY:	17.47	5.78	2.72	28.23
55 mm/hr	24.44	7.68	2.93	22.92
	31.31	20.04	15.57	46.61
	38.33	23.93	13.81	34.62
	46.06	24.99	12.95	31.11
	53.16	28.67	13.21	27.64
	60.45	29.22	12.98	26.65
	67.48	30.44	13.68	26.97
	74.50	35.97	17.02	28.39
	81.59	35.76	16.67	27.97
(9) FLAT	4.21	2.19	0.59	16.28
COVERED	11.14	3.79	1.23	19.48
	17.56	5.94	1.49	15.01
INTENSITY:	24.56	6.98	0.89	7.66
55 mm/hr	31.39	7.73	0.57	4.46
	38.42	7.74	0.65	5.08
	46.14	8.22	0.42	3.06
	53.21	8.90	0.56	3.80
	60.55	8.68	0.27	1.87
	67.56	9.08	0.46	3.01
	14.59	8.28	0.48	3.47
	22.08	4.17	0.35	5.07
(10) RIDGED	4.27	4.34	6.65	91.98
	11.22	5.46	4.22	46.32
INTENSITY:	18.02	5.94	4.28	43.27
56 mm/hr	25.03	7.12	4.43	37.38
	31.47	10.67	7.18	40.37
	38.49	13.39	7.87	35.24
	46.24	16.02	8.38	31.38
	53.27	27.39	16.43	35.99
	61.04	29.43	16.69	34.01
	68.03	33.18	19.83	35.86
	75.07	37.88	23.59	37.37
	82.15	38.65	21.93	34.05

INTERRILL DATA SOIL: NANSENE DATE: JULY 8, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	4.00	7.60	13.89	109.73
	9.00	16.00	30.36	113.88
INTENSITY:	14.00	24.92	47.36	114.03
61 mm/hr	19.00	28.85	52.84	109.89
	24.00	26.98	49.19	109.41
	29.00	38.11	68.09	107.20
	34.00	40.09	62.85	94.07
	39.00	42.00	58.51	83.58
	44.00	38.88	53.50	82.56
	49.00	40.82	65.18	95.81
	54.00	44.17	65.89	89.50
	59.00	46.18	67.55	87.77
(2) FLAT	4.00	7.60	13.89	109.73
OPEN	9.00	0.74	1.27	103.03
	14.00	19.22	13.02	40.66
INTENSITY:	19.00	32.40	18.08	33.48
67 mm/hr	24.00	26.03	14.48	33.38
	29.00	29.00	17.73	36.67
	34.00	21.73	13.04	36.00
	39.00	31.77	24.30	45.89
	44.00	36.37	27.64	45.60
	49.00	39.70	30.52	46.12
	54.00	37.11	23.89	38.63
	59.00	42.40	31.43	44.48

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	4.00	6.61	11.92	108.12
	9.00	12.34	28.81	140.11
INTENSITY:	14.00	31.56	53.81	102.29
58 mm/hr	19.00	46.51	74.05	95.53
	24.00	44.67	58.06	77.98
	29.00	61.29	83.21	81.46
	34.00	71.20	93.45	78.75
	39.00	36.60	63.58	104.24
	44.00	38.52	64.03	99.74
	49.00	38.13	56.31	88.60
	54.00	37.64	55.38	88.27
	59.00	43.62	67.31	92.59
(4) FLAT	1.57	6.08	4.92	48.51
COVERED	8.35	8.37	2.27	16.29
	15.33	10.23	2.06	12.07
INTENSITY:	22.43	21.47	2.85	7.97
67 mm/hr	29.38	27.50	2.48	5.40
	36.52	30.76	2.16	4.21
	43.24	33.48	1.97	3.53
	50.47	35.38	2.07	3.52
	59.03	40.62	2.85	4.20
	65.43	37.16	2.57	4.15

INTERRILL DATA SOIL: NANSENE DATE: JULY 8, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	2.00	2.64	1.22	27.76
OPEN	8.41	3.02	2.44	48.37
	15.42	11.01	7.61	41.47
INTENSITY:	22.49	16.99	9.09	32.12
63 mm/hr	29.43	22.21	12.09	32.65
	36.57	44.76	18.15	24.33
	43.29	45.31	20.25	26.81
	50.54	41.50	19.52	28.23
	59.08	41.69	16.58	23.86
	65.48	38.60	14.02	21.79
(6) RIDGED	2.05	5.90	6.39	64.93
	8.46	10.49	13.73	78.53
INTENSITY:	15.50	22.48	34.28	91.50
63 mm/hr	22.57	30.35	40.62	80.32
	29.50	34.12	45.66	80.28
	37.03	37.22	39.64	63.91
	43.35	37.13	41.17	66.53
	51.08	34.38	55.56	96.95
	59.13	41.70	57.42	82.62
	65.53	42.69	55.32	77.75
(7) RIDGED	2.09	4.96	2.84	34.39
	8.52	6.15	5.64	55.02
INTENSITY:	15.58	18.47	21.82	70.88
60 mm/hr	23.03	27.21	33.88	74.72
	29.55	32.81	39.80	72.78
	37.09	38.50	43.81	68.27
	43.41	36.63	39.82	65.23
	51.14	38.44	46.20	72.10
	59.20	42.95	51.46	71.90
	65.58	40.70	44.23	65.20

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	2.38	6.28	7.61	72.70
	9.11	12.86	18.86	88.00
INTENSITY:	16.22	27.71	40.03	86.68
63 mm/hr	23.20	34.77	47.04	81.18
	30.27	38.84	52.59	81.24
	37.32	41.81	46.18	66.27
	44.04	38.88	45.95	70.91
	51.35	42.85	60.28	84.39
	59.45	41.83	53.24	76.36
	66.44	46.34	68.94	89.26
(9) FLAT	2.43	5.29	2.07	23.45
COVERED	9.16	11.43	1.60	8.40
	16.28	14.73	1.86	7.59
INTENSITY:	23.32	16.17	1.71	6.34
62 mm/hr	30.34	21.75	2.58	7.10
	37.38	24.16	1.82	4.53
	44.10	27.43	1.87	4.10
	51.40	31.37	1.91	3.66
	59.49	31.97	1.80	3.38
	66.50	35.02	2.12	3.63
(10) RIDGED	2.50	6.62	8.28	75.10
	9.21	10.53	16.60	94.55
INTENSITY:	16.55	29.10	43.67	90.05
79 mm/hr	23.39	33.68	45.44	80.95
	30.41	35.07	36.96	63.25
	37.43	41.74	45.86	65.93
	44.15	40.49	47.45	70.31
	51.45	38.02	53.60	84.58
	59.58	43.05	53.16	74.08
	66.54	47.38	68.65	86.94

INTERRILL DATA SOIL: PALOUSE DATE: JULY 9, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	6.00	13.01	20.20	93.19
	11.00	36.47	47.87	78.75
INTENSITY:	16.00	48.35	74.12	91.97
66 mm/hr	21.00	45.67	64.28	84.45
	26.00	44.04	57.66	78.57
	31.00	47.29	66.66	84.56
	36.00	50.00	65.19	78.23
	41.00	51.03	66.71	78.43
	46.00	56.40	69.47	73.91
	49.30	52.60	60.36	68.85
	52.15	54.51	66.88	73.62
(2) FLAT	6.00	1.79	0.57	19.02
OPEN	11.00	17.84	10.87	36.56
	16.00	34.52	22.65	39.37
INTENSITY:	21.00	40.44	30.98	45.96
54 mm/hr	26.00	39.87	35.09	52.81
	31.00	44.86	39.84	53.29
	36.00	46.34	43.68	56.56
	41.00	46.91	42.93	54.91
	46.00	47.98	39.26	49.10
	49.30	46.72	41.04	52.70
	52.15	47.26	41.03	52.09

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	6.00	8.60	18.23	127.25
	11.00	29.63	59.15	119.79
INTENSITY:	16.00	36.42	66.46	109.48
57 mm/hr	21.00	35.54	68.31	115.32
	26.00	42.26	73.00	103.64
	31.00	44.76	77.71	104.17
	36.00	44.55	73.19	98.59
	42.15	52.67	91.93	104.68
	46.00	50.73	83.87	99.21
	49.30	46.45	64.57	83.41
	52.15	47.10	70.27	89.50
(4) FLAT	2.23	6.01	1.07	10.70
COVERED	9.25	12.90	1.46	6.78
	16.09	16.39	2.03	7.43
INTENSITY:	23.00	14.19	1.91	8.05
57 mm/hr	30.04	9.10	1.40	9.26
	37.06	13.92	1.67	7.19
	44.05	10.89	1.34	7.40
	52.45	14.96	1.67	6.71

INTERRILL DATA SOIL: PALOUSE DATE: JULY 9, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	2.28	2.80	0.92	19.67
OPEN	9.31	8.80	4.20	28.66
	16.16	14.17	7.50	31.74
INTENSITY:	23.07	37.78	15.88	25.21
62 mm/hr	30.20	43.30	20.01	27.73
	37.16	44.12	21.66	29.45
	44.14	39.79	16.37	24.68
	52.54	48.92	21.09	25.86
(6) RIDGED	2.33	4.41	6.90	93.84
	9.39	15.04	19.31	77.03
INTENSITY:	16.23	31.82	45.44	85.70
62 mm/hr	23.13	37.42	55.11	88.37
	30.27	41.04	62.82	91.84
	37.25	47.45	70.58	89.24
	44.21	41.02	47.11	68.91
	53.01	52.03	73.63	84.91
(7) RIDGED	2.38	4.95	4.71	57.00
	9.46	12.70	13.73	64.90
INTENSITY:	16.36	26.02	40.88	94.25
54 mm/hr	23.22	35.30	58.98	100.26
	30.38	38.43	54.64	85.32
	37.34	39.17	49.59	75.95
	44.32	43.88	58.02	79.34
	53.13	42.21	52.47	74.58

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	3.06			
	10.11	22.59	30.51	81.04
INTENSITY:	17.01	36.48	42.47	69.85
60 mm/hr	23.49	41.21	51.24	74.61
	31.07	44.93	60.05	80.19
	38.08	47.09	62.40	79.51
	45.04	45.42	52.33	69.13
	53.41	47.78	59.25	74.40
(9) FLAT	3.11	2.08	0.41	11.84
COVERED	10.19	3.32	0.67	12.04
	17.09	3.93	0.55	8.32
INTENSITY:	23.57	4.15	0.76	11.03
60 mm/hr	31.14	3.89	0.77	11.81
	38.17	5.06	1.60	18.98
	45.34	26.93	12.47	27.78
	53.47	34.05	4.28	7.54
(10) RIDGED	3.15	5.28	5.16	58.72
	10.25	13.53	16.45	72.96
INTENSITY:	17.15	26.28	37.04	84.59
57 mm/hr	24.04	32.63	44.49	81.81
	31.22	35.35	48.73	82.73
	38.23	38.93	51.47	79.34
	45.42	37.04	44.28	71.73
	53.55	42.73	54.44	76.44

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Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	5.00	9.39	15.62	99.84
	11.30	32.23	49.93	92.96
INTENSITY:	15.30	40.49	63.95	94.77
57 mm/hr	20.15	44.66	73.83	99.20
	25.00	46.07	65.02	84.69
	30.00	49.81	61.78	74.42
	35.00	47.33	56.99	72.25
	40.00	48.40	55.24	68.48
	45.00	45.79	47.03	61.63
	50.00	52.61	59.20	67.51
	55.00	56.30	66.21	70.56
	58.45	50.80	56.57	66.81
(2) FLAT	5.00	2.62	0.82	18.72
OPEN	11.30	9.80	3.13	19.15
	15.30	2.51	1.29	30.77
INTENSITY:	20.15	27.15	15.82	34.96
69 mm/hr	25.00	37.30	24.71	39.76
	30.00	41.01	24.51	35.86
	35.00	48.38	28.59	35.46
	40.00	49.57	31.69	38.36
	45.00	45.73	27.80	36.47
	50.00	38.16	21.97	34.55
	55.00	48.61	30.94	38.19
	58.45	49.26	30.79	37.51

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	5.00	7.34	9.28	75.85
	11.30	25.65	38.14	89.21
INTENSITY:	15.30	29.33	45.60	93.29
57 mm/hr	20.15	41.07	59.45	86.85
	25.00	41.63	54.98	79.24
	30.00	42.53	54.74	77.23
	35.00	51.09	60.76	71.35
	40.00	53.19	60.06	67.75
	45.00	53.62	55.01	61.55
	50.00	43.94	39.01	53.26 *
	55.00	53.21	63.53	71.63
	58.45	56.73	63.67	67.34

runoff excessively low

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	1.48	3.48	1.02	17.58
COVERED	8.36	5.95	2.13	21.51
	15.43	7.18	1.33	11.11
INTENSITY:	22.43	7.32	1.28	10.51
56 mm/hr	29.04	6.75	0.99	8.82
	36.44	5.60	0.92	9.90
	43.48	5.30	1.08	12.19
	51.41	4.83	0.98	12.20
	57.44	6.30	1.56	14.86

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Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	1.52	2.23	0.69	18.70
OPEN	8.42	3.05	1.45	28.58
	15.52	13.91	8.36	36.06
INTENSITY:	22.49	33.55	15.10	27.00
65 mm/hr	29.09	45.53	23.62	31.12
	36.49	45.77	25.06	32.85
	43.54	46.11	21.38	27.83
	51.52	50.46	20.49	24.36
	57.50	55.54	53.43	57.72 *
	splashed mud into sample			
(6) RIDGED	1.57	4.77	3.80	47.87
	8.49	14.94	17.03	68.41
INTENSITY:	15.59	32.61	41.61	76.56
67 mm/hr	22.56	41.35	51.83	75.20
	29.14	45.66	49.08	64.50
	36.56	49.83	46.70	56.24
	44.01	51.39	43.42	50.69
	52.00	48.67	43.99	54.23
	57.57	51.63	40.19	46.70
(7) RIDGED	2.04	4.63	5.41	70.13
	8.56	11.01	17.74	96.69
INTENSITY:	16.06	35.96	53.04	88.50
57 mm/hr	23.05	45.73	58.87	77.24
	29.22	47.19	51.90	65.99
	37.03	49.68	48.83	58.98
	44.10	44.90	40.73	54.42
	52.09	52.64	50.40	57.45
Spilled Sample *	58.03			

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	2.32	5.23	3.33	38.21
	9.21	19.46	20.21	62.30
INTENSITY:	16.32	38.26	48.08	75.40
66 mm/hr	23.31	46.03	56.26	73.33
	29.46	49.58	54.74	66.25
	37.25	51.45	51.46	60.01
	44.37	52.24	47.45	54.50
	52.42	53.32	45.84	51.59
	58.28	51.53	45.54	53.02
(9) FLAT	2.36	6.59	2.59	23.54
COVERED	9.27	10.28	1.94	11.35
	16.50	11.60	1.89	9.77
INTENSITY:	23.38	11.58	1.15	5.97
62 mm/hr	29.52	11.82	1.04	5.29
	37.30	11.32	1.03	5.46
	44.46	9.63	1.06	6.58
	52.50	11.15	1.57	8.44
	58.35	10.54	1.24	7.05
(10) RIDGED	2.41	5.00	5.57	66.78
	9.33	12.46	18.78	90.48
INTENSITY:	16.58	33.43	44.01	78.99
64 mm/hr	23.45	43.29	54.26	75.20
	29.57	45.03	44.99	59.95
	37.36	48.68	42.55	52.45
	44.53	46.80	37.65	48.27
	52.59	49.80	41.15	49.58
	58.42	52.25	40.35	46.34

INTERRILL DATA SOIL: PIERRE DATE: JULY 31, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	10.00	8.87	11.11	75.15
	15.00	23.17	21.88	56.66
INTENSITY:	20.00	35.34	32.92	55.90
59 mm/hr	25.00	35.21	35.91	61.18
	30.00	42.84	43.89	61.46
	35.00	48.29	48.32	60.03
	40.00	48.50	41.41	51.23
	45.00	50.92	39.82	46.92
	50.00	47.09	32.71	41.67
	55.00	48.71	31.52	38.82
	60.00	49.01	35.74	43.75
(2) FLAT	10.00	5.44	2.09	23.04
OPEN	15.00	21.22	15.98	45.18
	20.00	48.38	22.48	27.88
INTENSITY:	25.00	43.74	17.68	24.25
63 mm/hr	30.00	45.60	16.31	21.46
	35.00	41.72	13.84	19.90
	40.00	44.59	16.00	21.53
	45.00	42.62	14.49	20.40
	50.00	39.99	13.42	20.14
	55.00	42.30	14.04	19.92
	60.00	41.82	13.16	18.88

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	10.00	11.74	18.11	92.52
	15.00	26.77	26.17	58.66
INTENSITY:	20.00	39.19	33.73	51.64
67 mm/hr	25.00	42.75	39.90	56.00
	30.00	43.79	40.40	55.36
	35.00	46.11	41.25	53.68
	40.00	44.94	35.28	47.10
	45.00	45.37	33.00	43.64
	50.00	45.31	30.59	40.51
	55.00	47.76	32.75	41.15
	60.00	47.89	34.86	43.67
(4) FLAT	2.11	5.13	1.91	22.39
COVERED	9.15	5.55	1.27	13.77
	16.11	5.42	0.83	9.22
INTENSITY:	26.04	6.11	0.84	8.21
67 mm/hr	30.43	5.44	0.71	7.82
	37.54	6.59	0.83	7.55
	45.34	6.62	0.77	6.95
	53.59	7.04	0.73	6.18
	59.20	7.35	0.96	7.84

INTERRILL DATA SOIL: PIERRE DATE: JULY 31, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	2.16	2.71	0.35	7.80
OPEN	9.23	2.96	0.47	9.52
	16.49	12.58	9.24	44.09
INTENSITY:	23.53	48.15	21.63	26.95
72 mm/hr	30.48	48.75	17.07	21.01
	37.59	51.22	16.61	19.46
	45.40	55.57	16.90	18.25
	54.04	51.99	22.49	25.95 *
	59.28	43.04	14.34	20.00
	splashed mud into sample			
(6) RIDGED	2.24	5.60	5.67	60.73
	9.30	6.88	5.75	50.16
INTENSITY:	17.05	21.95	25.96	70.96
65 mm/hr	24.01	36.83	32.36	52.72
	30.57	48.24	44.49	55.34
	38.11	56.49	52.57	55.84
	45.48	57.55	45.28	47.20
	54.11	58.25	48.26	49.72
	59.36	57.87	39.91	41.38
(7) RIDGED	2.40	4.38	6.23	85.38
	9.38	7.88	20.47	155.78
INTENSITY:	17.13	28.46	31.32	66.03
58 mm/hr	24.07	41.76	40.55	58.27
	31.04	45.65	44.79	58.86
	38.17	49.62	43.99	53.19
	45.57	54.68	35.39	38.83
	54.15	52.99	41.69	47.21
	59.43	54.50	32.49	35.76

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	3.15	4.97	4.08	49.18
	10.05	11.89	12.02	60.67
INTENSITY:	17.56	31.38	33.11	63.30
59 mm/hr	24.36	38.70	37.98	58.88
	31.34	45.12	39.19	52.12
	38.55	49.18	38.17	46.57
	46.26	45.96	29.45	38.44
	54.39	42.37	26.01	36.84
	60.07	46.74	26.71	34.28
(9) FLAT	3.22	1.96	0.45	13.72
COVERED	10.10	2.03	0.31	9.26
	18.08	2.22	0.31	8.28
INTENSITY:	24.43	2.73	0.51	11.13
66 mm/hr	31.40	3.56	0.46	7.67
	39.04	5.33	0.72	8.14
	46.35	7.93	0.81	6.16
	54.44	6.98	0.52	4.50
	60.14	7.96	0.81	6.09
(10) RIDGED	3.43	6.01	3.06	30.51
	10.19	10.19	7.94	46.78
INTENSITY:	18.12	30.94	27.12	52.59
62 mm/hr	24.50	46.82	40.44	51.82
	31.48	55.17	49.26	53.56
	39.16	57.39	51.10	53.42
	46.42	58.81	41.15	41.98
	54.53	58.21	43.33	44.66
	60.21	57.41	35.81	37.43

INTERRILL DATA SOIL: WILLIAMS DATE: AUGUST 3, 1987

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1)	RIDGED	3.00	4.13	2.19	31.79
		13.00	19.88	16.84	50.80
INTENSITY:		18.00	28.59	22.86	47.97
60 mm/hr		23.00	37.40	31.57	50.65
		28.00	37.43	32.18	51.58
		33.00	42.50	36.70	51.82
		38.00	45.18	36.07	47.91
		43.00	38.62	29.00	45.06 *
		48.00	47.27	36.43	46.24
		53.00	42.52	36.05	50.88
		58.00	46.01	36.74	47.91

eceptionally low flow

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(2)	FLAT	3.00	2.76	0.92	19.93
	OPEN	13.00	9.99	7.44	44.68
		18.00	21.26	11.77	33.22
INTENSITY:		23.00	29.98	14.24	28.50
55 mm/hr		28.00	27.49	13.32	29.08
		33.00	37.82	16.39	26.01
		38.00	40.38	16.28	24.19
		43.00	37.52	14.67	23.46
		48.00	43.84	19.74	27.02
		53.00	44.15	17.71	24.07
		58.00	44.67	17.59	23.63

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(3)	RIDGED	3.00	5.34	2.61	29.34
		13.00	35.60	47.54	80.12
INTENSITY:		18.00	44.37	52.40	70.87
54 mm/hr		23.00	43.04	50.40	70.26
		28.00	43.31	47.21	65.40
		33.00	49.09	51.32	62.72
		38.00	53.88	54.94	61.19
		43.00	44.93	43.16	57.63
		48.00	51.68	50.23	58.32
		53.00	52.71	47.50	54.07
		58.00	52.92	46.98	53.26

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(4)	FLAT	0.24	2.77	0.89	19.17
	COVERED	7.31	3.35	0.92	16.55
		14.12	3.36	0.95	16.97
INTENSITY:		21.23	5.70	1.50	15.77
60 mm/hr		28.11	7.14	1.44	12.13
		35.12	6.73	1.67	14.91
		42.10	6.19	1.02	9.86
		50.40	6.81	1.25	10.99
		55.51	6.80	1.70	14.95

INTERRILL DATA SOIL: WILLIAMS DATE: AUGUST 3, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	0.29	2.41	0.52	12.90
OPEN	7.37	3.38	1.54	27.42
	14.21	6.54	4.82	44.25
INTENSITY:	21.33	18.82	10.50	33.48
52 mm/hr	28.18	21.42	10.71	29.99
	35.17	34.26	18.95	33.18
	42.17	30.16	13.79	27.44
	50.47	38.58	18.25	28.39
	56.00	40.92	18.80	27.56
(6) RIDGED	0.37	5.33	4.84	54.42
	7.43	16.33	23.12	84.92
INTENSITY:	14.29	34.42	55.47	96.70
66 mm/hr	21.43	46.72	63.53	81.60
	28.26	47.69	54.04	67.99
	35.25	51.76	57.45	66.60
	42.25	56.64	58.06	61.51
	50.56	59.00	59.12	60.13
	56.06	54.03	53.18	59.05
(7) RIDGED	0.42	5.38	5.81	64.77
	7.51	15.76	23.14	88.07
INTENSITY:	14.40	37.28	49.91	80.33
74 mm/hr	21.56	43.83	48.73	66.71
	28.34	48.68	48.68	60.01
	35.36	49.35	51.64	62.78
	42.31	50.79	43.89	51.85
	52.58	54.47	53.10	58.49
	56.15	52.46	43.12	49.32

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	1.21	3.90	1.32	20.36
	8.17	19.18	28.71	89.80
INTENSITY:	15.06	29.35	42.27	86.42
72 mm/hr	22.26	37.10	58.32	94.32
	29.01	37.92	57.95	91.70
	36.03	42.10	52.19	74.39
	43.05	42.07	51.29	73.16
	51.35	45.42	52.00	68.69
	57.04	42.68	48.63	68.36
(9) FLAT	1.29	4.95	4.90	59.33
COVERED	8.24	7.32	1.08	8.83
	15.12	9.16	1.02	6.70
INTENSITY:	22.33	10.72	0.99	5.53
65 mm/hr	29.08	9.53	1.53	9.62
	36.10	7.63	0.94	7.37
	43.12	6.53	0.74	6.79
	51.44	5.62	1.04	11.13
	57.09	7.50	1.46	11.70
(10) RIDGED	1.35	6.26	8.90	85.29
	8.32	27.30	48.20	105.91
INTENSITY:	15.20	37.21	54.28	87.53
73 mm/hr	22.44	40.34	46.90	69.76
	29.14	46.85	56.32	72.13
	36.17	47.17	50.69	64.48
	43.20	53.05	55.34	62.59
	51.54	54.43	54.75	60.36
	57.15	49.18	42.56	51.93

INTERRILL DATA SOIL: BARNES - ND DATE: AUGUST 4, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.00	4.68	2.28	29.31
	8.00	9.19	11.04	72.12
INTENSITY:	13.00	20.17	20.67	61.48
69 mm/hr	18.00	32.47	39.81	73.57
	23.00	34.38	37.58	65.59
	28.00	36.49	35.63	58.57
	33.00	44.03	48.45	66.02
	38.00	44.34	41.25	55.81
	43.00	40.86	33.17	48.71
	48.00	42.01	35.18	50.24
	53.00	42.36	33.44	47.37
	58.00	45.71	40.28	52.87
(2) FLAT	3.00	2.69	0.32	7.14
OPEN	8.00	5.26	1.81	20.70
	13.00	10.42	4.54	26.15
INTENSITY:	18.00	23.63	11.60	29.46
77 mm/hr	23.00	35.11	15.52	26.52
	28.00	43.82	17.26	23.64
	33.00	46.41	16.76	21.67
	38.00	50.19	16.17	19.33
	43.00	50.23	14.08	16.82
	48.00	51.91	15.07	17.42
	53.00	53.98	16.27	18.08
	58.00	53.43	17.05	19.14

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	3.00	5.10	2.84	33.49
	8.00	8.19	9.21	67.46
INTENSITY:	13.00	18.66	14.29	45.97
77 mm/hr	18.00	31.60	27.12	51.50
	23.00	36.09	39.38	65.47
	28.00	40.06	43.69	65.43
	33.00	41.13	44.64	65.13
	38.00	48.06	66.65	83.20
	43.00	48.65	53.86	66.41
	48.00	51.37	54.09	63.18
	53.00	50.19	51.81	61.94
	58.00	50.70	50.63	59.92
(4) FLAT	1.08	4.67	0.78	10.03
COVERED	7.50	9.86	1.13	6.91
	14.54	11.89	1.41	7.12
INTENSITY:	21.52	13.82	1.63	7.10
73 mm/hr	28.52	11.37	1.27	6.70
	36.02	8.67	0.93	6.41
	42.45	7.59	2.43	19.20
	49.50	5.56	1.03	11.12
	58.02	6.08	0.92	9.10
	65.04	5.91	0.78	7.95

INTERRILL DATA SOIL: BARNES - ND DATE: AUGUST 4, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	1.12	2.34	0.60	15.45
OPEN	7.57	3.06	0.89	17.49
	15.00	4.78	2.35	29.42
INTENSITY:	21.59	9.62	5.38	33.55
81 mm/hr	28.59	13.52	6.60	29.28
	36.09	21.25	7.93	22.41
	42.51	34.30	10.70	18.71
	49.57	40.34	11.02	16.39
	58.08	42.14	9.76	13.90
	65.12	46.11	9.77	12.71
(6) RIDGED	1.18	4.93	1.09	13.32
	8.03	9.21	6.23	40.59
INTENSITY:	15.19	22.75	20.64	54.43
68 mm/hr	22.09	32.58	31.98	58.90
	29.09	37.96	41.82	66.10
	36.19	38.59	39.11	60.80
	43.01	41.12	39.19	57.18
	50.04	40.60	40.22	59.44
Spilled Sample *	58.15			
	65.22	41.23	36.38	52.94
(7) RIDGED	1.23	5.27	2.57	29.27
	8.25	18.61	27.11	87.39
INTENSITY:	15.26	34.27	39.38	68.96
81 mm/hr	22.16	38.30	37.73	59.11
	29.20	42.25	42.19	59.91
	36.28	38.90	39.70	61.23
	43.07	45.15	41.52	55.17
	50.12	50.17	44.87	53.66
	58.25	44.27	35.81	48.53
	65.30	51.45	44.42	51.80

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	1.52	5.31	2.84	32.16
	8.47	15.78	22.63	86.06
INTENSITY:	15.49	30.79	43.34	84.45
75 mm/hr	23.13	38.30	48.58	76.10
	29.49	44.69	47.05	63.16
	36.59	44.87	41.56	55.58
	43.43	48.68	48.15	59.35
	50.48	49.87	47.16	56.75
	58.52	47.88	39.44	49.43
	65.59	52.33	45.26	51.89
(9) FLAT	1.57	3.24	1.09	20.24
COVERED	8.23	2.17	0.68	18.70
	15.55	3.49	1.03	17.71
INTENSITY:	23.19	5.72	1.42	14.89
72 mm/hr	29.58	4.31	1.03	14.38
	37.10	3.89	0.81	12.43
	43.52	5.42	0.91	10.10
	50.54	5.06	0.86	10.18
	58.58	5.77	0.98	10.21
	66.07	5.79	0.97	10.05
(10) RIDGED	2.02	5.03	3.55	42.35
	8.58	8.72	10.07	69.29
INTENSITY:	16.02	17.94	23.98	80.22
71 mm/hr	23.25	27.96	33.92	72.80
	30.06	33.96	37.82	66.81
	37.17	35.34	35.63	60.49
	44.01	37.04	37.71	61.08
	51.03	38.46	38.78	60.50
	59.06	43.57	43.38	59.75
	66.12	42.60	41.19	58.00

INTERRILL DATA SOIL: SVERDRUP DATE: AUGUST 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	6.00	4.45	5.64	75.99
	11.00	11.56	24.17	125.44
INTENSITY:	16.00	22.43	40.29	107.78
65 mm/hr	21.00	29.28	44.48	91.16
	26.00	30.26	43.16	85.57
	31.00	36.25	45.08	74.61
	36.00	36.47	40.66	66.89
	41.00	33.77	34.84	61.90
	46.00	38.00	35.00	55.27
	51.00	40.47	32.41	48.05
	56.00	38.68	30.39	47.14
	61.00	40.79	36.71	54.00
(2) FLAT	6.00	1.86	0.64	20.62
OPEN	11.00	4.85	1.98	24.51
	16.00	16.89	7.85	27.89
INTENSITY:	21.00	23.13	8.08	20.96
59 mm/hr	26.00	27.76	8.60	18.58
	31.00	31.68	8.84	16.74
	36.00	29.92	7.24	14.53
	41.00	30.81	6.12	11.93
	46.00	35.42	7.87	13.32
	51.00	37.24	9.04	14.56
	56.00	38.39	8.96	14.00
	61.00	38.69	8.07	12.52

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	6.00	4.59	4.71	61.56
	11.00	6.91	8.29	72.00
INTENSITY:	16.00	14.68	25.34	103.57
62 mm/hr	21.00	21.91	36.02	98.64
	26.00	26.21	35.62	81.53
	31.00	28.85	35.24	73.29
	36.00	32.28	36.85	68.51
	41.00	34.51	37.39	65.00
	46.00	34.87	38.47	66.20
	51.00	35.12	36.39	62.17
	56.00	35.53	31.32	52.88
	61.00	39.00	33.90	52.16
(4) FLAT	0.56	2.13	0.40	11.26
COVERED	6.49	2.31	0.66	17.12
	12.52	1.92	0.54	16.86
INTENSITY:	19.55	2.48	0.45	10.81
61 mm/hr	26.54	2.75	0.45	9.83
	34.01	3.84	0.62	9.76
	41.01	2.43	0.40	9.87
	47.48	3.91	0.73	11.21
	55.19	4.07	0.57	8.46
	62.15	3.20	0.56	10.58
	68.49	3.77	0.50	7.89

INTERRILL DATA SOIL: SVERDRUP DATE: AUGUST 6, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	1.00	2.21	0.47	12.64
OPEN	6.54	2.46	0.76	18.46
	13.00	2.04	0.67	19.79
INTENSITY:	20.01	2.64	0.86	19.57
64 mm/hr	27.00	14.31	4.69	19.68
	34.11	19.96	13.01	39.11
	41.10	26.94	7.20	16.02
	47.53	32.35	6.88	12.76
	55.28	34.30	6.28	10.98
	62.20	40.10	6.26	9.36
	68.54	43.34	6.87	9.51
(6) RIDGED	1.05	3.76	1.32	21.09
	7.01	4.14	2.94	42.69
INTENSITY:	13.06	5.89	4.73	48.17
63 mm/hr	20.08	9.59	14.84	92.83
	27.07	12.63	18.83	89.44
	34.17	19.42	28.32	87.48
	41.17	26.81	37.94	84.89
	48.00	31.65	41.70	79.05
	55.34	33.38	42.53	76.46
	62.27	34.56	41.67	72.35
	69.07	35.31	38.19	64.89
(7) RIDGED	1.10	4.60	4.87	63.61
	7.08	5.51	11.96	130.36
INTENSITY:	13.13	11.87	19.54	98.73
56 mm/hr	20.19	21.29	30.40	85.69
	27.15	28.50	39.64	83.46
	34.25	32.72	50.26	92.18
	41.25	36.07	44.27	73.64
	48.07	35.46	34.15	57.79
	55.39	39.62	41.68	63.12
	62.35	41.86	44.84	64.27
	69.18	41.53	43.72	63.17

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	1.15	4.36	1.35	18.62
	7.18	4.87	2.80	34.46
INTENSITY:	13.30	6.34	5.36	50.74
59 mm/hr	20.31	11.33	17.20	91.12
	27.30	18.53	27.10	87.73
	34.40	26.78	35.13	78.70
	41.43	30.09	32.66	65.14
	48.19	32.75	33.59	61.53
	55.59	34.32	34.24	59.86
	62.46	35.01	32.69	56.03
	69.30	39.16	35.28	54.05
(9) FLAT	1.20	3.88	0.51	7.93
COVERED	7.24	4.37	0.69	9.42
	13.36	4.48	0.77	10.35
INTENSITY:	20.89	5.34	0.86	9.67
63 mm/hr	27.40	4.33	0.66	9.18
	34.48	4.29	1.80	25.17
	41.53	4.36	0.63	8.70
	48.27	4.62	0.62	8.10
	56.10	1.83	0.43	14.16
	62.56	2.59	1.14	26.42
	69.39	2.45	0.45	10.98
(10) RIDGED	1.25	4.51	1.07	14.18
	7.29	5.00	2.46	29.56
INTENSITY:	13.43	6.46	5.21	48.36
64 mm/hr	20.48	10.02	12.62	75.58
	27.48	16.52	24.82	90.13
	35.02	18.00	25.29	84.29
	42.01	27.85	38.36	82.63
	48.38	32.30	42.04	78.07
	56.16	32.17	40.10	74.79
	63.09	36.78	45.56	74.31
	69.49	38.02	45.03	71.06

INTERRILL DATA SOIL: BARNES - MN DATE: AUGUST 7, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	6.00	5.85	9.24	94.84
	11.00	18.37	27.23	88.95
INTENSITY:	16.00	31.60	48.75	92.56
79 mm/hr	21.00	39.91	58.14	87.42
	26.00	42.63	53.93	75.90
	31.00	43.06	48.22	67.19
	36.00	44.95	46.63	62.24
	41.00	48.58	49.89	61.61
	46.00	49.77	45.80	55.22
	51.00	50.00	45.96	55.15
	56.00	49.34	44.05	53.57
	66.00	51.15	44.28	51.94
(2) FLAT	6.00	2.51	0.71	17.03
OPEN	11.00	4.12	2.00	29.09
	16.00	19.90	13.52	40.76
INTENSITY:	21.00	33.91	22.02	38.96
68 mm/hr	26.00	37.17	21.77	35.14
	31.00	39.81	22.54	33.97
	36.00	42.28	23.16	32.86
	41.00	43.93	21.38	29.20
	46.00	44.53	19.43	26.18
	51.00	46.48	27.63	35.66
	56.00	45.70	23.45	30.78
	66.00	47.08	21.40	27.27

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(3) RIDGED	6.00	4.58	5.49	72.02
	11.00	3.92	8.07	123.39
INTENSITY:	16.00	23.09	28.74	74.66
70 mm/hr	21.00	34.30	50.28	87.94
	26.00	41.05	56.28	82.27
	31.00	41.67	48.24	69.46
	36.00	35.08	40.05	68.50
	41.00	38.83	48.21	74.49
	46.00	38.71	39.63	61.42
	51.00	41.36	48.94	71.00
	56.00	38.51	43.24	67.37
	66.00	42.60	43.79	61.67
(4) FLAT	1.43	2.60	1.07	24.59
COVERED	8.39	4.23	1.10	15.58
	15.45	5.85	0.86	8.82
INTENSITY:	22.47	3.64	0.67	11.05
70 mm/hr	30.01	3.26	0.82	15.19
	36.49	4.07	2.42	35.74
	43.46	2.41	2.13	52.96
	50.39	4.72	2.17	27.55
	58.19	1.59	0.93	34.97
	65.13	6.76	0.97	8.65

INTERRILL DATA SOIL: BARNES - MN DATE: AUGUST 7, 1987

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	1.46	2.26	0.52	13.75
OPEN	8.44	8.09	4.36	32.32
	15.52	57.01	14.37	15.13
INTENSITY:	22.54	21.43	5.58	15.63
82 mm/hr	30.07	48.92	21.07	25.84
	36.56	48.21	16.65	20.72
	44.00	50.91	18.19	21.44
	50.54	52.81	17.61	20.01
	58.26	52.92	17.76	20.14
	65.19	51.87	15.79	18.27
(6) RIDGED	1.56	5.16	3.73	43.37
	8.48	5.62	8.42	89.88
INTENSITY:	15.58	20.87	31.65	90.97
79 mm/hr	23.01	34.65	63.07	109.22
	30.15	36.71	42.85	70.05
	37.05	39.94	38.78	58.26
	44.07	42.34	38.42	54.45
	51.27	41.64	33.29	47.97
	58.34	40.54	31.70	46.92
	65.27	42.94	32.82	45.86
(7) RIDGED	2.11	4.33	2.64	36.65
	8.55	6.10	6.86	67.55
INTENSITY:	16.04	18.85	24.38	77.62
79 mm/hr	23.09	30.27	39.65	78.59
	30.23	35.67	41.40	69.64
	37.14	40.73	40.49	59.64
	44.16	40.85	40.32	59.21
	51.33	40.49	31.55	46.75
	58.44	40.70	29.04	42.80
	65.36	42.65	30.90	43.47

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	2.31	4.26	2.06	29.04
	9.20	7.07	7.31	62.00
INTENSITY:	16.32	24.15	30.47	75.70
72 mm/hr	23.38	35.22	42.12	71.76
	30.49	40.39	41.75	62.01
	37.37	41.57	37.26	53.78
	44.42	42.08	33.25	47.41
	52.00	43.33	32.10	44.45
	59.10	45.71	32.50	42.66
	66.05	46.68	32.12	41.29
(9) FLAT	2.37	1.73	0.62	21.51
COVERED	9.27	4.91	1.63	19.87
spilled sample *	16.37			
	23.44	5.16	0.56	6.53
INTENSITY:	30.55	2.33	1.05	27.07
80 mm/hr	37.48	1.77	0.80	27.14
	44.47	2.97	0.55	11.09
	52.11	11.57	1.87	9.69
	59.17	17.62	1.60	5.45
	66.15	19.16	1.65	5.16
(10) RIDGED	2.43	4.43	1.31	17.69
	9.34	8.38	8.92	63.84
INTENSITY:	16.45	27.63	33.70	73.19
78 mm/hr	23.51	36.90	44.65	72.61
	31.02	41.85	42.98	61.63
	37.55	44.56	39.39	53.04
	44.55	45.09	37.94	50.48
	52.23	45.85	32.99	43.16
	59.25	43.50	29.21	40.29
	66.23	60.75	38.44	37.97

INTERRILL DATA SOIL: MEXICO DATE: JUNE 1, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	3.24	7.00	3.53	30.23
	10.09	15.25	12.49	49.12
INTENSITY:	17.19	28.11	33.32	71.11
62 mm/hr	24.18	37.27	40.94	65.91
	31.13	42.91	48.62	68.00
	38.14	46.60	48.99	63.08
	45.12	48.37	50.86	63.10
	52.10	45.62	48.32	63.55
	59.07	43.08	43.32	60.34
(2) FLAT	3.32	12.49	1.17	5.64
COVERED	10.16	7.35	1.41	11.54
	17.26	6.03	1.33	13.27
INTENSITY:	24.26	6.63	1.25	11.33
63 mm/hr	31.21	6.53	4.93	45.27
	38.21	4.61	1.22	15.84
	45.19	37.67	4.52	7.20
	52.18	38.26	2.79	4.37
	59.16	42.46	1.96	2.78
(3) RIDGED	3.39	6.91	3.96	34.37
	10.45	23.75	23.42	59.16
INTENSITY:	17.33	35.69	45.72	76.86
65 mm/hr	24.33	42.51	54.71	77.22
	31.29	43.07	50.08	69.77
	38.28	49.88	56.19	67.59
	45.28	48.09	53.70	67.01
	52.25	54.72	61.38	67.31
	59.24	51.97	50.48	58.27

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	3.33	5.04	0.69	8.26
COVERED	10.32	8.44	1.10	7.84
	17.32	1.24	0.45	21.85
INTENSITY:	24.31	1.38	0.55	23.88
59 mm/hr	31.31	4.72	1.02	12.94
	38.32	5.36	1.07	11.94
	45.32	4.62	0.82	10.66
	52.32	5.77	1.21	12.54
INTENSITY:	9.43	33.14	2.91	5.27
58.34 mm/hr	17.11	40.71	3.98	5.87
(5) FLAT	3.40	3.10	1.58	30.60
COVERED	10.38	6.18	2.82	27.36
	17.38	5.21	2.26	25.97
INTENSITY:	24.38	7.48	3.61	28.93
55 mm/hr	31.36	8.09	2.78	20.65
	38.38	9.11	3.29	21.65
	45.37	8.64	5.88	40.83
	52.38	3.49	4.86	83.63
INTENSITY:	9.48	5.60	2.16	23.14
53 mm/hr	17.19	3.54	1.23	20.91

INTERRILL DATA SOIL: MEXICO DATE: JUNE 1, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(6) RIDGED	3.45	2.60	1.90	43.87
	10.43	24.73	32.86	79.71
INTENSITY:	17.44	32.76	40.14	73.53
69 mm/hr	24.43	34.21	49.36	86.57
	31.42	42.41	51.06	72.24
	38.44	48.97	58.14	71.23
	45.42	50.84	63.46	74.89
	52.43	49.60	55.62	67.28
(7) RIDGED	3.50	1.11	1.27	68.88
	10.49	13.39	16.74	75.01
INTENSITY:	17.48	28.80	45.12	94.02
56 mm/hr	24.49	43.53	57.81	79.69
	31.46	35.73	47.03	78.97
	38.49	41.26	52.72	76.67
	45.47	39.14	49.77	76.30
	52.48	45.01	54.99	73.31
(8) RIDGED	4.05	7.24	6.95	57.65
	11.09	25.71	30.43	71.02
INTENSITY:	18.08	32.61	38.39	70.63
65 mm/hr	25.11	42.92	47.62	66.58
	32.08	40.85	46.05	67.64
	39.10	42.82	47.35	66.35
	46.05	42.32	51.31	72.75
	53.03	44.00	44.19	60.26

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	4.16	7.15	2.62	21.97
COVERED	11.16	0.89	0.62	42.07
	18.13	0.86	1.50	104.55
INTENSITY:	25.16	4.22	1.63	23.20
60 mm/hr	32.13	5.19	1.97	22.81
	39.17	4.40	12.28	167.47
	46.08	1.24	0.73	35.32
	53.09	0.91	1.23	81.68
(10) RIDGED	4.20	1.03	1.93	112.54
	11.21	22.44	16.92	45.24
INTENSITY:	18.21	23.47	14.86	37.99
62 mm/hr	25.23	38.36	27.20	42.54
	32.18	35.47	21.94	37.12
	39.24	44.38	48.40	65.44
	46.13	45.76	44.49	58.33
	53.14	44.00	36.77	50.14

INTERRILL DATA SOIL: GRENADA DATE: JUNE 3, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	1.29	6.59	3.23	29.44
	8.33	34.04	28.22	49.74
INTENSITY:	15.50	44.87	37.17	49.70
61 mm/hr	22.44	46.90	40.39	51.68
	29.12	52.79	46.51	52.86
	35.46	48.97	40.18	49.23
	42.45	49.48	38.70	46.93
	49.09	59.70	51.15	51.40
	55.17	58.38	48.38	49.73
(2) FLAT COVERED	1.36	13.21	1.93	8.78
	8.42	18.05	3.11	10.33
	15.57	19.76	4.19	12.71
INTENSITY:	22.52	11.56	1.85	9.57
66 mm/hr	29.21	23.15	5.99	15.54
	35.54	35.13	6.67	11.39
	42.53	24.82	3.68	8.89
	49.18	27.52	3.33	7.25
	55.25	29.07	2.09	4.32
(3) RIDGED	1.43	6.22	2.05	19.74
	8.48	29.11	19.36	39.91
INTENSITY:	16.02	46.92	37.75	48.27
61 mm/hr	22.59	43.73	37.82	51.89
	29.27	51.92	43.77	50.59
	36.02	52.70	43.40	49.41
	43.00	56.12	44.31	47.37
	49.26	59.13	46.06	46.74
	55.33	57.65	42.70	44.44

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT COVERED	1.32	11.40	2.59	13.65
	8.35	12.65	1.70	8.07
	15.31	13.31	2.02	9.11
INTENSITY:	22.33	16.56	1.96	7.09
60 mm/hr	27.31	10.68	1.44	8.09
	34.32	9.01	2.07	13.79
	41.33	16.11	2.93	10.93
	48.32	18.61	2.34	7.55
	55.02	18.22	1.88	6.17
INTENSITY:	2.02	21.02	1.75	5.01
60 mm/hr	9.08	19.43	1.56	4.83
(5) FLAT COVERED	1.36	10.06	1.17	6.99
	8.39	12.82	1.18	5.51
	15.38	13.53	1.39	6.14
INTENSITY:	22.36	11.46	1.07	5.62
55 mm/hr	27.37	9.31	0.83	5.33
	34.39	9.58	1.11	6.93
	41.39	16.82	2.28	8.12
	48.37	19.97	1.47	4.42
	55.07	21.39	1.56	4.37
INTENSITY:	2.10	26.02	2.70	6.22
57 mm/hr	9.14	25.98	1.04	2.40

INTERRILL DATA SOIL: GRENADA DATE: JUNE 3, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(6) RIDGED	1.40	5.25	3.62	41.39
	8.42	19.14	14.88	46.64
INTENSITY:	15.43	29.96	30.11	60.30
64 mm/hr	22.43	30.48	26.80	52.75
	27.45	29.74	26.84	54.16
	34.45	28.29	23.42	49.68
	41.46	31.60	22.90	43.50
	48.43	37.10	27.95	45.19
	55.13	42.42	39.94	56.49
(7) RIDGED	1.46	6.04	2.88	28.58
	9.24	20.10	12.57	37.51
INTENSITY:	15.49	26.88	23.73	52.97
58 mm/hr	22.49	38.41	32.49	50.74
	27.52	20.94	19.24	55.15
	34.50	39.57	37.41	56.73
	41.52	43.43	45.99	63.54
	48.48	45.36	42.39	56.08
	55.17	53.01	53.66	60.74
(8) RIDGED	2.00	8.67	9.50	65.77
	9.00	29.30	28.78	58.93
INTENSITY:	16.07	39.55	37.45	56.82
68 mm/hr	23.05	48.44	48.41	59.96
	28.10	51.55	54.59	63.53
	35.11	53.54	55.34	62.02
	42.09	53.48	51.98	58.32
	49.07	56.20	54.08	57.73
	55.41	57.41	58.07	60.68

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(9) FLAT	2.06	12.79	2.53	11.89
COVERED	9.04	17.48	2.07	7.11
	16.13	19.18	1.90	5.93
INTENSITY:	23.11	18.33	1.69	5.52
64 mm/hr	28.15	18.07	1.45	4.81
	35.17	15.60	1.80	6.91
	42.15	23.08	2.31	5.99
	49.12	23.95	2.17	5.42
	55.47	22.92	1.43	3.75
(10) RIDGED	2.11	7.26	4.75	39.26
	10.29	25.24	18.96	45.07
INTENSITY:	16.18	25.03	21.10	50.57
65 mm/hr	23.17	31.06	26.85	51.88
	28.21	29.66	28.11	56.87
	35.21	31.00	28.31	54.79
	42.21	50.34	48.20	57.46
	49.18	53.34	49.05	55.18
	55.54	51.63	48.15	55.95

INTERRILL DATA SOIL: TIFTON DATE: JUNE 6, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	33.04	19.60	9.87	30.21
	47.06	12.69	3.62	17.11
INTENSITY:				
63 mm/hr				
(2) FLAT	33.14	13.97	2.49	10.68
COVERED	40.12	6.94	1.64	14.16
	47.16	14.76	3.39	13.79
INTENSITY:	54.11	37.78	8.43	13.39
67 mm/hr				
(3) RIDGED	33.21	29.41	12.39	25.28
	40.18	24.42	10.81	26.57
INTENSITY:	47.22	17.18	5.73	20.03
66 mm/hr	54.18	9.84	2.34	14.26
(4) FLAT	33.04	21.91	8.21	22.50
COVERED	40.03	20.81	6.46	18.63
	47.02	22.48	4.47	11.93
INTENSITY:	54.01	17.80	4.02	13.56
67 mm/hr				
INTENSITY:	4.46	11.08	1.40	7.61
69 mm/hr	10.46	12.60	2.54	12.09

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	33.09	NA	0.89	NA
COVERED	40.08	NA	0.82	NA
	47.07	NA	2.45	NA
INTENSITY:	54.06	NA	1.14	NA
61 mm/hr				
INTENSITY:	4.56	NA	1.99	NA
59 mm/hr	10.53	NA	2.52	NA
(6) RIDGED	33.18	30.67	16.46	32.21
	40.17	22.53	11.72	31.22
INTENSITY:	47.15	25.02	10.71	25.68
68 mm/hr	54.13	25.25	10.87	25.83
(7) RIDGED	33.23	27.45	13.45	29.40
	40.25	35.61	20.62	34.74
INTENSITY:	47.23	33.16	19.19	34.73
58 mm/hr	54.19	31.04	17.41	33.65

INTERRILL DATA SOIL: TIFTON DATE: JUNE 6, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8) RIDGED	33.42	30.56	7.43	14.58
	40.45	30.78	8.35	16.28
INTENSITY:	47.45	31.60	9.73	18.48
62 mm/hr	54.43	28.35	10.14	21.47
(9) FLAT	33.48	NA	1.05	NA
COVERED	40.53	NA	1.09	NA
	47.52	NA	0.63	NA
INTENSITY:	54.51	NA	1.00	NA
66 mm/hr				
(10) RIDGED	33.53	NA	23.57	NA
	42.49	NA	23.90	NA
INTENSITY:	47.58	NA	20.67	NA
62 mm/hr	54.57	NA	18.61	NA

INTERRILL DATA SOIL: BONIFAY DATE: JUNE 7, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	45.00	8.38	6.61	47.30
	52.00	10.26	8.78	51.35
INTENSITY:	59.00	13.91	13.77	59.39
60 mm/hr				
(2) FLAT	45.10	4.17	1.39	20.02
COVERED	52.07	4.43	0.99	13.43
	59.10	4.66	1.18	15.14
INTENSITY:				
69 mm/hr				
(3) RIDGED	45.24	7.58	7.54	59.75
	52.15	7.98	7.37	55.47
INTENSITY:	59.18	10.95	11.92	65.35
63 mm/hr				
(4) FLAT	45.02	3.09	1.19	23.19
COVERED	52.02	2.09	0.82	23.55
	59.02	2.11	0.92	26.11
INTENSITY:				
68 mm/hr				
INTENSITY:	49.06	1.71	0.82	28.61
61 mm/hr	58.20	1.77	1.30	43.96

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	45.08	4.91	1.06	12.97
COVERED	52.06	5.35	1.04	11.66
	61.05	5.72	1.60	16.77
INTENSITY:				
70 mm/hr				
INTENSITY:	49.12	5.14	4.49	52.39
64 mm/hr	58.29	5.00	1.23	14.72
(6) RIDGED	45.14	23.89	28.34	71.17
	52.12	30.81	45.01	87.67
INTENSITY:	59.19	34.83	63.83	109.97
72 mm/hr				
(7) RIDGED	45.28	8.56	6.63	46.50
	52.21	12.31	10.69	52.13
INTENSITY:	59.27	16.78	19.07	68.20
55 mm/hr				
(8) RIDGED	45.58	3.34	3.00	53.87
	52.44	3.84	4.13	64.51
INTENSITY:	59.47	2.94	2.71	55.45
60 mm/hr				

INTERRILL DATA SOIL: BONIFAY DATE: JUNE 7, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	46.05	4.93	1.37	16.65
COVERED	52.49	4.96	1.67	20.26
	59.55	5.00	0.70	8.35
INTENSITY:				
64 mm/hr				
(10) RIDGED	46.12	9.24	14.95	97.06
	52.56	10.35	12.76	73.97
INTENSITY:	60.01	12.18	15.30	75.35
64 mm/hr				

INTERRILL DATA SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	12.00	34.66	40.24	69.65
	19.10	44.18	44.53	60.47
INTENSITY:	26.02	49.19	51.31	62.58
68 mm/hr	33.04	52.26	51.19	58.77
	40.02	49.19	46.35	56.54
	47.04	53.40	46.58	52.34
	54.01	55.45	48.58	52.57
	61.18	50.83	39.89	47.09
(2) FLAT	12.09	11.68	1.95	10.02
COVERED	19.16	15.16	3.53	13.96
	26.10	19.76	3.23	9.80
INTENSITY:	33.12	26.89	4.36	9.73
63 mm/hr	40.11	25.83	3.15	7.31
	47.08	29.01	4.71	9.73
	54.13	28.98	4.99	10.32
	61.27	27.85	4.11	8.86
(3) RIDGED	12.15	43.77	25.71	35.24
	19.23	50.96	31.08	36.59
INTENSITY:	26.17	55.80	42.12	45.29
71 mm/hr	33.19	56.74	36.58	38.69
	40.19	56.25	35.61	37.98
	47.17	61.96	39.36	38.12
	54.22	61.64	36.17	35.21
	61.34	61.27	36.47	35.72

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	12.02	7.28	1.02	8.45
COVERED	19.08	8.68	1.28	8.83
	26.02	7.98	0.99	7.48
INTENSITY:	33.02	7.08	1.04	8.77
62 mm/hr	40.03	6.46	0.92	8.54
	47.02	6.46	0.85	7.86
	54.03	6.56	0.74	6.76
	61.06	5.24	0.61	7.01
INTENSITY:	4.55	2.48	0.42	10.24
57 mm/hr	11.07	10.38	1.59	9.20
(5) FLAT	12.07	7.40	0.65	5.24
COVERED	19.12	9.53	1.32	8.29
	26.10	4.37	1.00	13.71
INTENSITY:	33.09	6.09	0.74	7.29
63 mm/hr	40.09	5.41	0.44	4.92
	47.11	5.75	0.26	2.76
	54.10	5.53	0.33	3.53
	61.14	6.36	0.47	4.41
INTENSITY:	5.00	6.12	0.46	4.49
63 mm/hr	11.11	4.97	0.34	4.13

INTERRILL DATA SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(6) RIDGED	12.13	26.98	11.47	25.51
	19.17	42.40	19.06	26.97
INTENSITY:	26.19	39.56	14.50	21.99
58 mm/hr	33.17	40.80	16.71	24.57
	40.17	37.70	18.49	29.43
	47.18	38.39	13.73	21.45
	54.16	40.97	15.39	22.53
	61.23	42.12	17.14	24.42
(7) RIDGED	12.19	45.78	28.46	37.30
	19.23	50.92	34.50	40.65
INTENSITY:	26.27	54.45	38.46	42.38
69 mm/hr	33.24	55.60	32.47	35.04
	40.26	54.34	33.34	36.81
	47.24	55.21	33.89	36.84
	54.23	53.73	34.41	38.43
	61.27	52.28	32.79	37.64
(8) RIDGED	12.40	28.61	16.37	34.33
	19.47	35.69	23.48	39.48
INTENSITY:	26.50	46.82	29.95	38.38
64 mm/hr	33.43	49.43	32.23	39.12
	40.45	50.42	30.94	36.82
	47.43	53.17	34.76	39.22
	54.46	51.85	32.21	37.27
	61.45	56.29	35.83	38.19

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	12.46	10.12	1.09	6.48
COVERED	19.52	14.75	1.74	7.10
	26.55	13.78	1.09	4.73
INTENSITY:	33.49	14.65	1.91	7.84
60 mm/hr	40.50	15.46	1.39	5.39
	47.52	16.87	2.08	7.39
	54.52	15.61	1.78	6.85
	61.49	16.63	1.61	5.82
(10) RIDGED	12.50	28.92	11.96	24.82
	19.58	35.67	22.09	37.16
INTENSITY:	27.01	42.64	28.73	40.43
56 mm/hr	33.56	49.86	30.78	37.03
	40.56	49.58	30.16	36.50
	47.58	53.68	38.37	42.89
	54.58	52.45	32.16	36.78
	61.55	52.15	33.27	38.28

INTERRILL DATA SOIL: HIWASSEE DATE: JUNE 10, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	11.04	44.74	28.25	37.88
	18.02	51.83	34.21	39.60
INTENSITY:	25.02	56.30	36.91	39.34
66 mm/hr	32.02	54.18	33.13	36.69
	39.04	56.86	35.08	37.02
	46.02	57.14	43.63	45.82
(2) FLAT	11.09	6.02	0.81	8.07
COVERED	18.09	8.97	1.16	7.74
	25.10	10.90	1.29	7.09
INTENSITY:	32.11	10.83	0.88	4.88
64 mm/hr	39.10	10.23	1.61	9.46
	46.09	12.11	1.83	9.07
(3) RIDGED	11.14	46.43	27.90	36.05
	18.16	54.39	34.79	38.38
INTENSITY:	25.16	57.02	36.54	38.45
68 mm/hr	32.17	58.11	32.94	34.02
	39.16	56.71	27.68	29.29
	46.14	58.35	27.70	28.49
(4) FLAT	11.02	23.78	3.35	8.46
COVERED	18.01	24.57	2.39	5.83
	25.03	23.73	2.64	6.68
INTENSITY:	32.01	22.16	4.20	11.37
65 mm/hr	39.01	22.98	3.44	8.98
	46.02	22.56	2.43	6.47
INTENSITY:	36.27	27.04	2.31	5.12
59 mm/hr	42.57	21.74	3.16	8.72
(5) FLAT	11.08	22.28	2.45	6.61
COVERED	18.07	13.06	1.97	9.05
	25.08	27.16	3.74	8.26
INTENSITY:	32.08	31.79	5.49	10.37
59 mm/hr	39.07	24.33	4.36	10.76
	46.07	15.41	4.77	18.59
INTENSITY:	36.31	14.57	3.86	15.91
56 mm/hr	43.02	14.40	3.69	15.39
(6) RIDGED	11.14	48.05	19.99	24.96
	18.14	54.39	35.45	39.11
INTENSITY:	25.14	59.64	32.08	32.28
70 mm/hr	32.15	64.81	36.01	33.34
	39.14	51.47	25.11	29.27
	46.14	58.74	30.66	31.32
(7) RIDGED	12.19	40.55	39.11	57.86
	18.20	47.91	40.72	51.00
INTENSITY:	25.19	52.58	42.08	48.02
62 mm/hr	32.22	56.98	44.34	46.70
	39.20	49.25	35.12	42.78
	46.20	52.29	36.54	41.93
(8) RIDGED	11.41	47.56	35.71	45.05
	18.45	48.95	35.13	43.07
INTENSITY:	25.41	48.06	26.25	32.77
64 mm/hr	32.42	47.41	30.10	38.10
	39.40	52.45	34.97	40.00
	46.41	51.23	33.55	39.29

INTERRILL DATA SOIL: HIWASSEE DATE: JUNE 10, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	11.46	20.24	3.07	9.09
COVERED	18.49	18.15	4.05	13.40
	25.46	21.07	5.43	15.47
INTENSITY:	32.47	45.35	4.29	5.68
66 mm/hr	39.43	18.82	2.67	8.52
	46.46	44.84	2.68	3.59
(10) RIDGED	11.50	45.88	25.01	32.71
	18.54	51.90	31.41	36.31
INTENSITY:	25.51	60.53	40.78	40.42
67 mm/hr	32.52	63.33	46.25	43.82
	39.48	50.66	26.58	31.49
	46.51	51.47	28.91	33.70

INTERRILL DATA SOIL: GASTON DATE: JUNE 13, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	9.57	30.38	28.66	56.60
	16.54	47.94	38.28	47.90
INTENSITY:	23.56	51.83	39.74	45.99
62 mm/hr	30.55	59.22	47.26	47.88
	35.14	56.78	41.94	44.32
	45.05	58.96	41.99	42.73
	52.05	58.31	37.30	38.38
	59.05	51.66	32.98	38.31
(2) FLAT	10.01	15.57	3.18	12.24
COVERED	17.01	17.73	2.57	8.68
	24.12	25.83	3.16	7.35
INTENSITY:	31.02	30.37	3.54	7.00
68 mm/hr	35.18	27.19	3.03	6.69
	45.13	29.08	3.31	6.82
	52.11	27.85	3.20	6.89
	59.13	27.92	2.17	4.66
(3) RIDGED	10.08	43.22	38.42	53.33
	17.08	56.67	41.68	44.14
INTENSITY:	24.09	59.53	42.73	43.07
66 mm/hr	31.08	62.07	41.89	40.50
	35.21	62.82	41.82	39.94
	45.19	62.19	39.59	38.19
	52.18	65.91	41.07	37.39
	59.20	55.26	31.65	34.36

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	10.03	22.98	2.40	6.27
COVERED	17.02	21.49	2.52	7.05
	24.01	20.08	2.33	6.97
INTENSITY:	31.00	20.51	2.57	7.50
70 mm/hr	38.01	20.37	2.78	8.18
	45.01	11.97	1.75	8.75
	52.02	21.57	3.54	9.84
	59.03	18.65	3.06	9.85
INTENSITY:	66.04	14.73	2.59	10.53
72 mm/hr	62.35	6.70	2.68	24.00
(5) FLAT	10.07	15.34	4.71	18.43
COVERED	17.07	13.96	2.68	11.50
	24.06	16.46	3.76	13.71
INTENSITY:	31.05	19.13	3.85	12.07
54 mm/hr	38.07	16.30	3.46	12.75
	45.08	16.52	3.81	13.85
	52.08	19.05	3.59	11.29
	59.10	16.80	3.01	10.73
INTENSITY:	56.08	23.40	5.11	13.11
64 mm/hr	62.39	31.37	3.79	7.24

INTERRILL DATA SOIL: GASTON DATE: JUNE 13, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(6) RIDGED	10.10	34.15	16.78	29.49
	17.14	48.07	29.60	36.95
INTENSITY:	24.12	53.94	33.19	36.91
65 mm/hr	31.09	57.83	39.61	41.10
	38.13	63.97	38.16	35.80
	45.15	68.29	40.56	35.64
	52.12	56.43	32.95	35.04
	59.17	52.60	28.69	32.72
(7) RIDGED	10.14	30.32	20.33	40.24
	17.21	38.01	26.08	41.17
INTENSITY:	24.19	47.16	32.66	41.55
54 mm/hr	31.15	51.98	35.51	40.99
	38.20	51.13	32.63	38.28
	45.21	47.73	29.14	36.62
	52.18	49.62	30.03	36.31
	59.24	44.16	25.18	34.22
(8) RIDGED	10.29	39.57	2.37	3.59
	17.38	49.63	34.16	41.29
INTENSITY:	24.37	50.35	34.77	41.44
61 mm/hr	31.32	55.18	34.09	37.06
	38.40	53.56	31.89	35.73
	45.38	55.84	29.18	31.36
	52.35	57.00	28.06	29.54
	59.42	49.69	22.30	26.93

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(9) FLAT	10.33	19.60	2.35	7.20
COVERED	17.42	21.73	2.54	7.01
	24.42	23.76	3.03	7.64
INTENSITY:	31.38	32.26	3.07	5.71
65 mm/hr	38.44	23.42	2.62	6.72
	45.45	23.82	2.51	6.32
	52.40	21.47	2.27	6.36
	59.47	20.66	2.24	6.51
(10) RIDGED	10.38	36.68	12.53	20.49
	17.48	46.76	20.73	26.60
INTENSITY:	24.48	52.21	25.38	29.16
58 mm/hr	31.43	57.22	27.25	28.58
	38.48	55.28	27.17	29.49
	45.50	56.25	26.37	28.13
	52.45	59.05	26.70	27.13
	59.53	77.68	21.29	16.44

INTERRILL DATA SOIL: OPEQUON DATE: JUNE 15, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	9.54	46.00	59.59	77.72
	16.56	57.97	83.19	86.10
INTENSITY:	47.59	62.60	72.28	69.28
62 mm/hr	52.34	75.59	86.56	68.71
	59.10	61.63	62.27	60.62
	66.11	61.13	55.87	54.83
	73.28	57.98	50.03	51.77
(2) FLAT	10.00	13.67	3.33	14.60
COVERED	41.02	28.76	6.24	13.02
	48.07	30.26	4.99	9.89
INTENSITY:	52.38	41.18	5.60	8.16
72 mm/hr	59.16	35.70	4.29	7.21
	66.17	36.21	4.29	7.11
	73.33	26.41	3.54	8.03
(3) RIDGED	10.06	45.32	58.19	77.04
	41.06	56.28	77.27	82.38
INTENSITY:	48.16	60.87	70.26	69.25
64 mm/hr	52.41	64.92	71.07	65.68
	59.21	65.72	57.52	52.51
	66.24	60.65	65.18	64.47
	73.37	55.79	46.38	49.88

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(4) FLAT	10.01	23.31	2.35	6.04
COVERED	17.01	19.17	1.96	6.12
	24.01	20.40	2.45	7.19
INTENSITY:	31.03	23.22	2.69	6.95
59 mm/hr	38.01	20.75	2.40	6.94
	45.01	18.30	1.94	6.37
	52.16	19.74	2.48	7.52
INTENSITY:	44.15	17.87	1.18	3.96
61 mm/hr	50.29	19.45	1.06	3.27
(5) FLAT	10.06	10.09	2.58	15.32
COVERED	17.07	11.78	1.48	7.54
	24.10	11.65	0.68	3.49
INTENSITY:	31.10	31.90	13.21	24.84
65 mm/hr	38.07	30.90	3.83	7.44
	45.10	38.00	6.18	9.76
	52.23	35.47	4.44	7.51
INTENSITY:	44.29	18.71	1.51	4.85
71 mm/hr	50.31	39.18	2.42	3.70

INTERRILL DATA SOIL: OPEQUON DATE: JUNE 15, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(6) RIDGED	10.12	49.70	61.79	74.60
	17.13	54.62	61.04	67.05
INTENSITY:	24.16	56.59	58.60	62.14
70 mm/hr	31.16	57.35	50.07	52.39
	38.15	56.02	48.37	51.81
	45.16	58.04	51.53	53.26
	52.28	60.52	53.85	53.39
(7) RIDGED	10.17	46.84	61.37	78.62
	17.12	49.69	59.46	71.80
INTENSITY:	24.23	58.21	61.36	63.25
61 mm/hr	31.24	60.48	57.42	56.97
	38.19	58.37	51.60	53.04
	45.21	54.38	44.96	49.60
	52.34	52.49	36.61	41.84
(8) RIDGED	10.37	45.96	58.16	75.93
	17.36	52.69	53.51	60.93
INTENSITY:	24.40	59.85	57.00	57.14
60 mm/hr	31.42	60.96	56.00	55.12
	38.38	57.73	48.47	50.38
	45.40	51.27	46.00	53.83
	52.51	72.77	44.52	36.70

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	10.41	39.80	11.12	16.77
COVERED	17.41	21.79	2.73	7.52
	24.44	19.40	2.23	6.89
INTENSITY:	31.51	19.93	2.11	6.36
67 mm/hr	38.43	44.12	3.39	4.61
	45.45	43.74	2.46	3.38
	52.58	46.07	3.06	3.98
(10) RIDGED	10.46	45.38	70.19	92.82
	17.45	55.34	71.56	77.58
INTENSITY:	24.48	60.57	65.31	64.70
65 mm/hr	31.57	59.81	56.85	57.03
	38.48	60.65	53.36	52.79
	45.49	56.55	54.15	57.44
	53.04	58.64	49.51	50.67

INTERRILL DATA SOIL: FREDERICK DATE: JUNE 16, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	13.11	47.19	56.34	71.64
	20.11	62.12	71.25	68.82
INTENSITY:	27.11	65.40	74.47	68.32
73 mm/hr	34.16	63.19	71.54	67.93
	41.10	64.24	60.44	56.46
(2) FLAT	13.17	11.78	1.84	9.38
COVERED	20.17	27.75	14.31	30.94
	27.18	27.06	5.04	11.18
INTENSITY:	34.21	26.44	5.34	12.11
72 mm/hr	41.16	27.80	4.54	9.81
(3) RIDGED	13.23	45.85	56.77	74.29
	20.23	53.33	63.27	71.18
INTENSITY:	27.23	53.81	61.24	68.29
63 mm/hr	34.26	54.41	57.60	63.52
	41.21	55.64	55.53	59.88
(4) FLAT	13.03	19.10	1.24	3.90
COVERED	20.01	17.55	2.61	8.92
	27.01	23.85	2.65	6.68
INTENSITY:	34.07	23.50	1.56	3.98
59 mm/hr	41.02	21.63	1.13	3.13
INTENSITY:	37.44	23.37	1.18	3.02
63 mm/hr	46.16	23.30	1.19	3.06

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	13.09	8.16	1.00	7.37
COVERED	20.09	6.38	1.04	9.74
	27.06	21.04	3.74	10.67
INTENSITY:	34.13	23.17	4.45	11.51
77 mm/hr	41.07	24.10	2.27	5.66
INTENSITY:	37.48	30.20	3.82	7.59
75 mm/hr	46.19	27.76	3.68	7.95
(6) RIDGED	13.14	31.06	32.76	63.28
	20.14	39.72	41.48	62.66
INTENSITY:	27.11	44.68	42.66	57.28
72 mm/hr	34.18	45.52	40.96	53.99
	41.11	46.73	40.72	52.27
(7) RIDGED	13.18	33.70	34.57	61.56
	20.19	42.22	42.36	60.20
INTENSITY:	27.15	41.89	34.85	49.91
60 mm/hr	34.24	41.56	36.71	53.01
	41.16	49.29	35.66	43.42
(8) RIDGED	13.33	32.97	30.91	56.25
	20.35	41.91	35.45	50.74
INTENSITY:	27.30	39.16	33.84	51.84
71 mm/hr	34.42	44.21	32.76	44.46
	41.34	50.81	36.33	42.90

INTERRILL DATA SOIL: FREDERICK DATE: JUNE 16, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(9) FLAT	13.38	13.93	3.68	15.84
COVERED	20.39	2.68	2.06	46.08
	27.38	8.16	2.97	21.86
INTENSITY:	34.47	22.78	3.27	8.60
68 mm/hr	41.38	26.34	2.38	5.43
(10) RIDGED	13.43	27.09	25.54	56.56
	20.45	35.98	31.90	53.19
INTENSITY:	27.44	34.53	31.29	54.37
60 mm/hr	34.53	46.16	35.35	45.95
	41.45	46.51	34.31	44.26

INTERRILL DATA SOIL: MANOR DATE: JUNE 17, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	8.13	30.43	45.70	90.10
	15.12	50.17	69.53	83.14
INTENSITY:	22.13	53.42	67.68	76.01
66 mm/hr	29.13	57.74	66.24	68.83
	36.13	59.92	65.33	65.42
(2) FLAT	8.17	16.82	1.29	4.59
COVERED	15.17	18.35	1.86	6.08
	22.18	16.55	1.57	5.70
INTENSITY:	29.18	12.34	1.56	7.58
73 mm/hr	36.20	19.84	1.90	5.73
(3) RIDGED	8.21	32.92	41.50	75.65
	15.22	47.79	61.33	77.00
INTENSITY:	22.23	52.17	58.93	67.77
75 mm/hr	29.24	58.33	63.63	65.45
	36.25	60.59	61.05	60.46
(4) FLAT	7.01	11.82	2.68	13.58
COVERED	14.01	15.85	2.04	7.73
	21.02	13.85	1.76	7.63
INTENSITY:	28.02	12.85	1.72	8.03
66 mm/hr	35.05	12.36	1.85	8.97
INTENSITY:	29.11	10.40	2.05	11.81
68 mm/hr	33.53	12.54	4.10	19.62

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	7.06	10.78	0.55	3.04
COVERED	14.05	11.65	0.56	2.90
	21.06	11.92	0.53	2.66
INTENSITY:	28.08	11.35	0.47	2.47
67 mm/hr	35.07	10.47	0.46	2.62
INTENSITY:	29.15	10.28	0.40	2.35
64 mm/hr	33.56	7.38	2.52	20.46
(6) RIDGED	7.10	18.76	17.03	54.45
	14.10	41.42	37.24	53.94
INTENSITY:	21.10	47.56	43.91	55.39
65 mm/hr	28.13	46.48	35.42	45.73
	35.11	47.52	36.24	45.76
(7) RIDGED	7.13	32.82	34.38	62.86
	14.14	49.09	54.72	66.88
INTENSITY:	21.14	52.08	54.04	62.26
63 mm/hr	28.18	55.84	52.59	56.51
	35.16	57.67	54.09	56.28

INTERRILL DATA SOIL: MANOR DATE: JUNE 17, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(8) RIDGED	7.25	37.12	44.08	71.26
	14.26	38.28	39.52	61.95
INTENSITY:	21.27	42.13	40.94	58.30
66 mm/hr	28.31	39.43	30.74	46.78
	35.29	36.87	30.79	50.11
(9) FLAT	7.35	8.89	1.43	9.68
COVERED	14.31	11.26	2.68	14.26
	21.31	12.18	3.01	14.83
INTENSITY:	28.34	19.45	1.43	4.42
65 mm/hr	35.32	17.47	1.03	3.53
(10) RIDGED	7.40	25.81	30.37	70.61
	14.35	55.99	62.67	67.16
INTENSITY:	21.35	51.23	53.10	62.19
67 mm/hr	28.39	50.65	44.18	52.33
	35.36	51.49	43.33	50.50

INTERRILL DATA SOIL: CARIBOU DATE: JUNE 29, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	7.01	46.06	31.42	40.93
	14.11	52.71	33.84	38.51
INTENSITY:	21.02	52.49	29.40	33.60
63 mm/hr	28.02	55.15	22.11	24.05
	35.02	54.71	22.39	24.55
	42.03	60.68	27.52	27.21
(2) FLAT	7.08	15.74	2.02	7.70
COVERED	14.17	11.88	1.64	8.30
	21.08	53.29	7.29	8.21
INTENSITY:	28.08	55.28	3.71	4.02
67 mm/hr	35.07	56.25	2.64	2.82
	42.09	55.15	2.86	3.12
(3) RIDGED	7.15	53.52	36.34	40.74
	14.21	56.93	39.48	41.61
INTENSITY:	21.13	55.22	33.45	36.35
63 mm/hr	28.13	57.63	33.33	34.70
	35.12	55.32	28.71	31.13
	42.14	58.92	27.29	27.79

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(4) FLAT	7.02	6.61	0.71	6.41
COVERED	14.10	11.51	2.78	14.47
	21.02	16.03	2.66	9.97
INTENSITY:	28.01	7.92	1.00	7.58
61 mm/hr	35.00	3.65	1.21	19.84
	42.02	40.10	5.30	7.93
INTENSITY:	41.11	49.49	2.06	2.50
65 mm/hr	47.23	49.16	1.14	1.39
(5) FLAT	7.07	20.25	1.99	5.91
COVERED	14.14	17.29	1.30	4.52
	21.07	27.69	2.70	5.86
INTENSITY:	28.07	42.45	2.67	3.77
76 mm/hr	35.05	38.58	2.47	3.84
	42.08	39.28	1.75	2.67
INTENSITY:	41.16	54.14	1.47	1.63
71 mm/hr	47.28	49.96	1.35	1.62

INTERRILL DATA SOIL: CARIBOU DATE: JUNE 29, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(6) RIDGED	7.12	49.41	41.15	49.97
	14.19	59.34	39.16	39.60
INTENSITY:	21.13	63.00	35.90	34.19
76 mm/hr	28.13	64.54	39.61	36.82
	35.10	62.59	34.26	32.84
	42.13	58.43	31.11	31.94
(7) RIDGED	7.17	50.44	37.79	44.96
	14.24	55.03	31.49	34.34
INTENSITY:	21.18	54.73	29.02	31.81
61 mm/hr	28.17	51.40	24.50	28.60
	35.16	47.19	21.92	27.87
	42.19	54.66	23.10	25.36
(8) RIDGED	7.30	47.09	35.18	44.83
	14.37	50.78	30.21	35.69
INTENSITY:	21.36	50.67	26.30	31.14
64 mm/hr	28.37	55.30	33.86	36.74
	35.35	53.35	29.09	32.72
	42.37	49.79	24.42	29.43

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(9) FLAT	7.35	8.13	1.05	7.75
*No Sample Taken **				
COVERED	21.42	42.66	5.49	7.72
	28.44	53.10	4.77	5.39
INTENSITY:	35.42	55.17	1.98	2.16
68 mm/hr	42.43	58.79	2.82	2.88
(10) RIDGED	7.41	34.95	20.83	35.76
	14.50	40.18	21.24	31.72
INTENSITY:	21.49	51.73	26.25	30.44
67 mm/hr	28.50	53.17	28.44	32.09
	35.48	51.40	23.70	27.67
	42.51	52.94	25.40	28.79

INTERRILL DATA SOIL: COLLAMER DATE: JULY 2, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	8.02	48.14	74.73	93.13
	15.02	51.50	65.22	75.99
INTENSITY:	22.06	56.38	60.81	64.72
61 mm/hr	28.59	59.03	64.21	65.27
	36.03	54.49	52.54	57.85
(2) FLAT	8.08	27.17	2.15	4.75
COVERED	15.08	36.03	5.62	9.36
	22.11	48.71	6.16	7.58
INTENSITY:	29.09	61.98	5.65	5.47
69 mm/hr	36.09	65.01	3.67	3.39
(3) RIDGED	8.13	44.82	69.36	92.86
	15.15	48.65	61.22	75.50
INTENSITY:	22.16	54.23	59.01	65.29
67 mm/hr	29.16	53.51	55.97	62.77
	36.15	54.10	56.81	63.00
(4) FLAT	8.01	9.05	3.86	25.60
COVERED	16.36	7.64	4.29	33.67
	22.02	8.40	2.69	19.21
INTENSITY:	29.01	10.88	4.10	22.60
64 mm/hr	36.01	19.35	4.18	12.96
INTENSITY:	29.13	45.98	3.90	5.09
63 mm/hr	35.19	48.82	3.85	4.73

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	8.06	8.26	2.89	21.01
COVERED	15.07	7.26	2.06	17.01
	22.07	8.37	2.12	15.22
INTENSITY:	29.07	9.83	2.71	16.54
67 mm/hr	36.08	21.28	2.97	8.38
INTENSITY:	29.20	48.94	5.46	6.70
69 mm/hr	35.28	53.33	3.46	3.89
(6) RIDGED	8.10	39.07	67.72	103.99
	15.13	46.89	63.34	81.05
INTENSITY:	22.11	51.56	57.11	66.46
69 mm/hr	29.15	55.31	57.67	62.56
	36.13	52.63	52.55	59.91
(7) RIDGED	8.16	41.37	71.95	104.34
	15.19	51.06	76.93	90.39
INTENSITY:	22.16	50.88	60.62	71.49
58 mm/hr	29.21	53.18	55.83	62.99
	36.21	54.20	57.60	63.77
(8) RIDGED	8.34	41.46	54.28	78.54
	15.35	49.39	54.09	65.70
INTENSITY:	22.33	50.81	53.96	63.72
61 mm/hr	29.42	50.09	47.74	57.18
	36.40	52.13	48.44	55.75

INTERRILL DATA SOIL: COLLAMER DATE: JULY 2, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	8.38	14.30	2.14	8.97
COVERED	15.39	14.21	1.70	7.17
	22.39	15.06	1.70	6.78
INTENSITY:	29.49	15.70	1.77	6.77
68 mm/hr	36.45	15.66	1.24	4.73
(10) RIDGED	8.44	41.86	67.16	96.27
	15.45	52.32	62.10	71.22
INTENSITY:	22.48	51.00	54.27	63.85
62 mm/hr	29.55	52.73	49.93	56.81
	36.51	51.96	46.61	53.82

INTERRILL DATA SOIL: MIAMIAN DATE: JULY 5, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	13.04	40.59	25.56	37.79
	19.56	45.85	39.37	51.51
INTENSITY:	26.57	46.00	28.69	37.42
62 mm/hr	33.56	46.26	33.27	43.16
	40.56	46.85	30.00	38.42
	47.57	57.30	38.42	40.23
(2) FLAT	13.09	8.14	0.35	2.57
COVERED	20.01	16.47	2.42	8.81
	27.02	19.72	2.36	7.19
INTENSITY:	34.03	19.76	1.86	5.65
69 mm/hr	41.03	20.03	2.96	8.85
	48.02	22.30	2.68	7.21
(3) RIDGED	13.14	23.52	23.25	59.32
	20.07	33.96	26.98	47.67
INTENSITY:	27.07	39.11	31.34	48.07
63 mm/hr	34.09	48.48	36.74	45.47
	41.09	44.83	32.15	43.03
	48.07	49.87	32.31	38.87
(4) FLAT	13.09	4.74	1.12	14.22
COVERED	20.01	4.77	1.23	15.42
	27.01	9.16	22.67	148.50
INTENSITY:	34.01	10.54	5.66	32.25
62 mm/hr	41.01	8.07	1.96	14.58
	48.01	10.92	2.56	14.07
INTENSITY:	40.55	26.81	2.29	5.12
62 mm/hr	47.08	43.66	2.51	3.46

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	13.13	6.26	1.94	18.63
COVERED	20.06	6.70	1.66	14.87
	27.07	8.43	4.49	31.97
INTENSITY:	34.06	10.67	6.23	35.03
67 mm/hr	41.07	8.55	2.81	19.74
	48.07	8.15	2.86	21.02
INTENSITY:	41.00	27.37	3.19	7.00
70 mm/hr	47.12	41.03	5.65	8.27
(6) RIDGED	13.18	28.51	23.88	50.26
	20.11	29.37	17.23	35.21
INTENSITY:	27.13	41.97	28.68	41.00
67 mm/hr	34.11	47.72	30.10	37.84
	41.12	51.98	29.55	34.11
	48.12	44.14	24.30	33.03
(7) RIDGED	13.23	22.07	20.57	55.90
	20.16	27.67	19.82	42.98
INTENSITY:	27.19	35.59	19.66	33.15
58 mm/hr	34.16	41.20	25.52	37.17
	41.17	40.26	23.90	35.63
	48.17	47.88	26.82	33.60

INTERRILL DATA SOIL: LEWISBURG DATE: JULY 7, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(1) RIDGED	12.00	30.29	36.95	73.19
	19.00	45.30	41.50	54.97
INTENSITY:	26.01	47.28	41.04	52.08
60 mm/hr	33.00	48.21	39.31	48.92
	40.00	51.03	38.11	44.81
(2) FLAT	12.05	15.34	2.72	10.65
COVERED	19.05	17.82	4.25	14.30
	26.07	19.85	1.34	4.06
INTENSITY:	33.07	20.54	1.44	4.20
68 mm/hr	40.07	23.37	3.96	10.18
(3) RIDGED	12.10	29.85	27.72	55.72
	19.11	43.80	36.86	50.50
INTENSITY:	26.13	50.20	43.27	51.73
65 mm/hr	33.13	51.65	37.86	43.98
	40.13	56.67	36.51	38.66
(4) FLAT	12.01	4.40	1.67	22.79
COVERED	19.01	5.26	2.57	29.34
	26.02	6.49	2.66	24.61
INTENSITY:	33.01	6.35	3.10	29.35
61 mm/hr	40.01	6.70	3.33	29.81
INTENSITY:	28.24	7.67	2.31	18.04
63 mm/hr	34.25	9.34	2.74	17.58

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(5) FLAT	12.06	5.02	0.74	8.84
COVERED	19.07	6.45	1.15	10.74
	26.08	5.82	3.43	35.31
INTENSITY:	33.06	7.00	1.99	17.06
66 mm/hr	40.08	8.23	2.03	14.79
INTENSITY:	28.28	12.86	2.16	10.08
69 mm/hr	34.29	11.97	1.91	9.60
(6) RIDGED	12.10	21.81	12.84	35.33
	19.13	44.28	26.74	36.23
INTENSITY:	26.13	53.42	35.44	39.80
66 mm/hr	33.12	56.46	35.33	37.54
	40.13	53.36	54.36	61.12
(7) RIDGED	12.17	37.03	30.00	48.60
	19.19	49.39	44.04	53.50
INTENSITY:	26.19	49.54	41.08	49.75
58 mm/hr	33.17	51.93	38.63	44.63
	40.19	55.81	36.33	39.05

INTERRILL DATA SOIL: LEWISBURG DATE: JULY 7, 1988

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(8)	RIDGED	12.36	29.14	24.82	51.10
		19.38	49.42	41.79	50.73
INTENSITY:		26.28	50.37	41.36	49.26
62 mm/hr		33.33	54.71	39.16	42.94
		40.14	49.71	35.14	42.41
(9)	FLAT	12.39	8.63	5.35	37.16
	COVERED	19.44	10.08	4.74	28.19
		26.42	10.52	3.83	21.86
INTENSITY:		33.37	11.81	3.77	19.16
64 mm/hr		40.39	11.51	3.63	18.93

Plot		Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(10)	RIDGED	12.42	37.06	42.53	68.86
		19.49	53.36	52.24	58.74
INTENSITY:		26.47	52.45	45.89	52.50
61 mm/hr		33.41	52.40	39.34	45.04
		40.44	55.86	36.69	39.41

INTERRILL DATA SOIL: MIAMI DATE: JULY 7, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(1) RIDGED	1.47	13.78	20.87	90.89
	8.47	27.80	33.53	72.36
INTENSITY:	15.47	39.82	37.97	57.22
61 mm/hr	22.47	47.77	41.59	52.23
	29.47	49.93	39.60	47.59
	36.46	54.66	42.72	46.90
(2) FLAT	1.54	11.15	1.41	7.57
COVERED	8.52	12.61	1.92	9.13
	15.52	15.50	1.53	5.94
INTENSITY:	22.53	18.77	2.40	7.67
70 mm/hr	29.53	18.17	2.23	7.37
	36.53	16.29	2.13	7.86
(3) RIDGED	1.58	27.61	28.63	62.22
	8.57	45.48	48.54	64.03
INTENSITY:	15.57	52.90	46.16	52.36
70 mm/hr	22.59	54.97	43.08	47.02
	29.58	56.56	38.95	41.32
	36.57	57.85	39.62	41.10
(4) FLAT	12.01	5.30	1.12	12.69
COVERED	19.01	7.59	2.03	16.07
	26.01	10.42	7.83	45.09
INTENSITY:	33.01	8.44	2.17	15.45
59 mm/hr	40.01	7.94	1.71	12.88
	47.01	8.66	2.38	16.49
INTENSITY:	48.00	9.63	1.98	12.32
50 mm/hr	53.06	10.92	2.51	13.79

Plot	Clock Time min.sec	Flow mm/hr	Erosion $g/mn/m^2$	Conc. g/l
(5) FLAT	12.06	5.55	1.71	18.50
COVERED	19.06	5.76	2.06	21.44
	26.07	6.42	1.68	15.71
INTENSITY:	33.07	7.21	2.17	18.04
73 mm/hr	40.06	6.89	2.16	18.82
	47.08	6.86	2.15	18.82
INTENSITY:	48.05	11.82	1.91	9.71
60 mm/hr	53.09	11.52	1.65	8.59
(6) RIDGED	12.10	30.29	24.25	48.03
	19.11	44.37	30.20	40.84
INTENSITY:	26.12	43.34	30.23	41.85
69 mm/hr	33.13	43.01	25.94	36.19
	40.11	44.63	23.93	32.17
	47.12	40.87	19.09	28.03
(7) RIDGED	12.14	23.60	35.31	89.79
	19.15	36.00	34.07	56.77
INTENSITY:	26.16	42.34	32.34	45.83
57 mm/hr	33.18	48.73	30.88	38.03
	40.16	47.59	29.15	36.75
	47.17	51.38	29.76	34.75
(8) RIDGED	12.28	25.82	29.20	67.86
	19.32	35.92	35.64	59.52
INTENSITY:	26.30	41.55	34.15	49.32
58 mm/hr	33.35	46.35	31.79	41.15
	40.33	46.56	30.03	38.70
	47.33	49.46	33.96	41.19

INTERRILL DATA SOIL: MIAMI DATE: JULY 7, 1988

Plot	Clock Time min.sec	Flow mm/hr	Erosion g/mn/m^2	Conc. g/l
(9) FLAT	12.31	10.14	1.15	6.78
COVERED	19.36	11.37	1.64	8.67
	26.33	22.34	4.49	12.05
INTENSITY:	33.39	22.51	3.25	8.67
70 mm/hr	40.36	34.16	3.91	6.86
	47.37	35.44	2.89	4.90
(10) RIDGED	12.35	34.25	33.86	59.31
	19.40	45.86	42.48	55.57
INTENSITY:	26.38	47.69	33.02	41.54
69 mm/hr	33.43	48.34	28.13	34.91
	40.41	48.72	28.73	35.39
	47.42	46.46	27.48	35.50

INTERRILL ERODIBILITY ANALYSIS

Plot	Type	Side	D_i g/m^2/mn	I mm/hr	Slope %	K_i x 10^{-6}
Sharpsburg						
1	R	L	35.5	66.7	57.0	1.85
2	F	L	11.3	55.6	5.9	2.10
3	R	L	41.4	63.9	57.0	2.35
5	F	R	8.2	63.9	5.3	1.20
6	R	R	23.9	57.8	57.0	1.66
7	R	R	24.1	62.7	57.0	1.42
8	R	R	21.1	54.8	57.0	1.70
10	R	R	30.3	51.9	57.0	2.61
					Average	1.85
Hersh						
1	R	L	101.9	65.6	61.8	5.41
3	R	L	65.4	51.1	58.9	5.76
4	F	R	30.3	64.2	6.6	4.00
6	R	R	68.2	70.5	56.0	3.19
7	R	R	27.6	62.2	58.9	1.64
8	R	R	108.4	70.5	58.9	5.02
9	F	R	19.2	64.2	6.6	2.53
10	R	R	53.9	56.4	58.9	3.90
					Average	3.93
Keith						
1	R	L	78.7	86.2	67.2	2.39
2	F	L	19.2	72.2	5.2	2.22
3	R	L	76.4	62.8	56.3	4.50
5	F	R	19.7	53.3	4.9	4.28
6	R	R	46.9	61.9	45.5	2.98
7	R	R	63.0	59.7	56.3	4.10
8	R	R	61.2	62.8	56.3	3.61
10	R	R	50.5	64.1	56.3	2.85
					Average	3.36
Amarillo						
1	R	L	51.9	60.2	55.2	3.34
2	F	L	22.0	51.7	3.8	5.58
3	R	L	104.5	65.8	44.5	5.91
5	F	R	12.0	64.0	3.3	2.08
6	R	R	58.0	69.3	33.8	3.20
7	R	R	55.8	72.0	44.5	2.63
8	R	R	65.4	56.0	44.5	5.10
10	R	R	75.5	60.2	44.5	5.11
					Average	4.12

Plot	Type	Side	D_i g/m^2/mn	I mm/hr	Slope %	K_i x 10^{-6}
Woodward						
1	R	L	151.3	73.0	44.8	6.94
2	F	L	19.5	65.7	7.6	2.30
3	R	L	82.1	65.7	45.1	4.64
5	F	R	14.1	59.6	7.1	2.09
6	R	R	58.5	57.0	45.5	4.39
7	R	R	65.1	59.6	45.1	4.48
8	R	R	48.3	62.1	45.1	3.06
10	R	R	59.4	59.6	45.1	4.08
					Average	4.00
Heiden						
1	R	L	13.5	59.6	39.6	0.96
2	F	L	10.8	61.3	4.1	1.89
3	R	L	27.3	66.5	46.6	1.49
5	F	R	20.4	64.0	4.0	3.30
6	R	R	17.9	52.0	53.6	1.56
7	R	R	20.1	53.9	46.6	1.67
10	R	R	14.2	58.4	46.6	1.01
					Average	1.70
Whitney						
1	R	L	32.6	58.6	23.3	2.90
2	F	L	18.1	63.4	7.6	2.32
3	R	L	43.4	63.3	38.6	2.76
5	F	R	8.8	70.4	6.8	0.95
6	R	R	44.1	64.8	53.9	2.46
7	R	R	55.8	60.2	38.6	3.92
8	R	R	41.4	62.5	38.6	2.70
10	R	R	55.0	60.1	38.6	3.88
					Average	2.74
Academy						
1	R	L	48.9	65.0	44.0	2.84
2	F	L	12.6	58.9	3.8	2.46
3	R	L	47.5	59.7	52.2	3.15
5	F	R	17.6	64.9	4.6	2.63
6	R	R	39.6	54.4	44.0	3.29
7	R	R	26.3	56.2	52.2	1.96
8	R	R	56.4	56.1	52.2	4.22
10	R	R	43.0	63.5	52.2	2.52
					Average	2.88

INTERRILL ERODIBILITY ANALYSIS

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Los Banos						
1	R	L	40.5	63.6	57.0	2.32
2	F	L	18.8	64.2	4.3	2.94
3	R	L	41.1	68.2	57.0	2.05
5	F	R	10.4	51.1	4.0	2.63
6	R	R	28.5	51.1	57.0	2.53
7	R	R	37.6	61.4	57.0	2.31
8	R	R	33.2	50.5	57.0	3.01
10	R	R	26.1	52.2	57.0	2.22
					Average	2.50
Portneuf						
1	R	L	13.9	53.5	38.6	1.24
2	F	L	7.0	58.8	5.9	1.15
3	R	L	18.1	58.8	43.7	1.29
5	F	R	5.0	69.2	5.6	0.61
6	R	R	12.9	51.4	48.9	1.17
7	R	R	15.7	47.3	43.7	1.72
8	R	R	15.1	54.5	43.7	1.25
10	R	R	20.5	55.6	43.7	1.63
					Average	1.26
Nansene						
1	R	L	63.0	61.1	60.0	3.87
2	F	L	28.4	66.6	7.1	3.37
3	R	L	60.8	58.2	60.0	4.12
5	F	R	17.6	63.4	7.0	2.33
6	R	R	52.4	63.4	60.0	2.99
7	R	R	45.4	59.6	60.0	2.94
8	R	R	57.1	63.4	60.0	3.26
10	R	R	55.7	78.6	60.0	2.07
					Average	3.12
Palouse						
1	R	L	65.9	66.0	52.9	3.56
2	F	L	41.1	54.1	6.7	7.60
3	R	L	77.7	57.0	61.5	5.47
5	F	R	19.8	62.1	5.9	2.93
6	R	R	63.5	62.1	70.2	3.69
7	R	R	53.7	54.1	61.5	4.20
8	R	R	58.5	60.5	61.5	3.65
10	R	R	49.7	57.2	61.5	3.47
					Average	4.32

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Zahl						
1	R	L	57.3	56.8	48.5	4.25
2	F	L	27.9	68.6	8.1	2.95
3	R	L	60.6	56.8	48.5	4.49
5	F	R	22.6	64.6	7.1	2.87
6	R	R	43.6	66.9	48.5	2.33
7	R	R	48.0	56.9	48.5	3.55
8	R	R	47.6	66.1	48.5	2.61
10	R	R	40.4	64.1	48.5	2.36
					Average	3.17
Pierre						
1	R	L	34.9	58.9	57.7	2.33
2	F	L	13.8	62.8	6.3	1.94
3	R	L	32.8	67.0	57.7	1.69
5	F	R	16.2	72.3	6.3	1.72
6	R	R	46.5	64.6	57.7	2.58
7	R	R	38.4	57.7	57.7	2.67
8	R	R	30.1	59.4	57.7	1.97
10	R	R	42.8	61.9	57.7	2.58
					Average	2.18
Williams						
1	R	L	36.3	60.2	37.4	2.58
2	F	L	17.4	55.5	4.7	3.54
3	R	L	47.0	54.0	48.4	3.86
5	F	R	17.4	52.2	5.2	3.84
6	R	R	57.0	66.4	59.5	2.97
7	R	R	47.9	74.5	48.4	2.07
8	R	R	51.0	72.3	48.4	2.34
10	R	R	50.8	72.9	48.4	2.29
					Average	2.94
Barnes - ND						
1	R	L	35.5	69.0	44.6	1.82
2	F	L	15.6	77.1	6.0	1.49
3	R	L	52.6	77.0	48.6	2.12
5	F	R	10.3	80.6	5.7	0.92
6	R	R	38.7	67.6	52.7	1.99
7	R	R	41.7	81.1	48.6	1.52
8	R	R	45.0	75.3	48.6	1.90
10	R	R	40.3	71.3	48.6	1.90
					Average	1.71

INTERRILL ERODIBILITY ANALYSIS

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Sverdrup						
1	R	L	33.6	65.0	57.3	1.84
2	F	L	8.5	58.9	4.3	1.58
3	R	L	35.0	61.5	56.8	2.14
5	F	R	6.6	63.9	3.8	1.09
6	R	R	41.0	63.4	56.4	2.37
7	R	R	41.1	55.5	56.8	3.09
8	R	R	33.9	58.9	56.8	2.27
10	R	R	43.2	63.7	56.8	2.47
					Average	2.11
Barnes - MN						
1	R	L	45.0	79.4	55.8	1.66
2	F	L	23.0	68.1	8.3	2.44
3	R	L	43.9	69.8	56.7	2.09
5	F	R	17.3	81.7	7.7	1.32
6	R	R	34.1	78.5	57.5	1.28
7	R	R	33.0	78.7	56.7	1.23
8	R	R	32.5	72.1	56.7	1.45
10	R	R	34.6	78.2	56.7	1.31
					Average	1.60
Mexico						
1	R	L	47.9	62.0	51.0	2.95
3	R	L	55.4	64.8	51.0	3.13
6	R	R	57.1	68.6	51.0	2.87
7	R	R	51.1	56.4	51.0	3.80
8	R	R	47.6	64.7	51.0	2.70
10	R	R	37.9	61.5	51.0	2.37
					Average	2.97
Grenada						
1	R	L	44.6	60.6	51.0	2.87
3	R	L	44.1	60.5	51.0	2.85
6	R	R	28.6	63.6	51.0	1.67
7	R	R	44.9	58.4	51.0	3.12
8	R	R	54.9	67.7	51.0	2.84
10	R	R	43.4	64.9	51.0	2.44
					Average	2.63

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Tifton						
1	R	L	6.7	62.6	51.0	0.41
3	R	L	7.8	66.4	51.0	0.42
6	R	R	12.4	68.3	51.0	0.63
7	R	R	17.7	57.6	51.0	1.26
8	R	R	8.9	62.1	51.0	0.55
10	R	R	21.7	62.3	51.0	1.33
					Average	0.77
Bonifay						
1	R	L	9.7	60.2	51.0	0.63
3	R	L	8.9	62.7	51.0	0.54
6	R	R	45.7	72.4	51.0	2.07
7	R	R	21.1	55.3	51.0	0.94
8	R	R	3.3	60.1	51.0	0.21
10	R	R	14.3	63.5	51.0	0.84
					Average	0.87
Cecil (Eroded)						
1	R	L	41.6	67.6	51.0	2.16
3	R	L	36.9	70.6	51.0	1.76
6	R	R	16.2	58.1	51.0	1.14
7	R	R	33.6	68.8	51.0	1.68
8	R	R	33.4	64.3	51.0	1.92
10	R	R	33.5	56.2	51.0	2.52
					Average	1.86
Hiwassee						
1	R	L	37.2	65.6	51.0	2.05
3	R	L	31.2	68.3	51.0	1.59
6	R	R	31.0	70.4	51.0	1.48
7	R	R	39.5	62.1	51.0	2.43
8	R	R	31.2	64.0	51.0	1.81
10	R	R	35.6	66.7	51.0	1.90
					Average	1.88
Gaston						
1	R	L	38.6	62.3	51.0	2.35
3	R	L	38.5	66.4	51.0	2.07
6	R	R	35.1	65.3	51.0	1.95
7	R	R	29.2	54.4	51.0	2.34
8	R	R	27.9	61.4	51.0	1.75
10	R	R	25.4	58.5	51.0	1.76
					Average	2.04

INTERRILL ERODIBILITY ANALYSIS

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Opequon						
1	R	L	63.7	61.5	51.0	3.98
3	R	L	60.0	64.0	51.0	3.48
6	R	R	51.0	70.2	51.0	2.45
7	R	R	47.6	60.7	51.0	3.06
8	R	R	48.7	60.0	51.0	3.21
10	R	R	53.5	65.0	51.0	3.00
					Average	3.20
Frederick						
1	R	L	69.4	72.6	51.0	3.12
3	R	L	59.4	62.7	51.0	3.58
6	R	R	41.5	71.7	51.0	1.91
7	R	R	37.4	60.2	51.0	2.45
8	R	R	34.6	70.8	51.0	1.64
10	R	R	33.2	60.1	51.0	2.18
					Average	2.48
Manor						
1	R	L	67.2	66.3	51.0	3.62
3	R	L	61.2	74.9	51.0	2.58
6	R	R	38.2	65.1	51.0	2.14
7	R	R	53.9	63.5	51.0	3.16
8	R	R	35.5	65.6	51.0	1.95
10	R	R	50.8	66.7	51.0	2.70
					Average	2.69
Caribou						
1	R	L	25.4	62.5	51.0	1.54
3	R	L	20.7	62.9	51.0	1.24
6	R	R	35.2	75.7	51.0	1.46
7	R	R	24.6	63.6	51.0	1.44
8	R	R	28.4	63.6	51.0	1.66
10	R	R	25.9	66.9	51.0	1.37
					Average	1.45

Plot	Type	Side	D_i $g/m^2/mn$	I mm/hr	Slope %	K_i $x\ 10^{-6}$
Collamer						
1	R	L	60.7	60.9	51.0	3.88
3	R	L	58.3	67.0	51.0	3.08
6	R	R	57.7	69.2	51.0	2.85
7	R	R	62.7	58.3	51.0	4.37
8	R	R	51.1	60.8	51.0	3.27
10	R	R	53.2	61.9	51.0	3.30
					Average	3.46
Miamian						
1	R	L	32.6	61.8	51.0	2.02
3	R	L	33.1	62.7	51.0	2.00
6	R	R	28.2	67.1	51.0	1.48
7	R	R	24.0	57.5	51.0	1.72
8	R	R	18.3	57.8	51.0	1.30
10	R	R	23.9	63.8	51.0	1.39
					Average	1.65
Lewisburg						
1	R	L	40.0	59.7	51.0	2.66
3	R	L	38.6	65.0	51.0	2.17
6	R	R	38.0	66.1	51.0	2.06
7	R	R	40.0	58.5	51.0	2.77
8	R	R	39.4	62.4	51.0	2.40
10	R	R	43.5	61.4	51.0	2.74
					Average	2.47
Miami						
1	R	L	40.5	60.7	51.0	2.60
3	R	L	42.0	69.9	51.0	2.04
6	R	R	24.8	69.3	51.0	1.22
7	R	R	30.5	56.6	51.0	2.26
8	R	R	32.5	58.4	51.0	2.26
10	R	R	29.3	69.2	51.0	1.45
					Average	1.97

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.
hr:mn	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l
Sharpsburg												
11:50	0.58	24.08	0.36	41.40	1.08	39.01	0.19	19.73	0.57	28.77	0.41	35.77
11:55	0.60	22.20	0.32	40.11	0.93	45.00	0.44	34.34	0.53	31.29	0.44	38.43
12:00	0.61	24.62	0.33	41.54	1.18	41.53	0.60	38.90	0.84	39.68	1.17	47.35
12:05	1.46	23.17	0.37	54.10	1.30	45.01	0.00	52.54	1.44	37.13	1.38	41.64
12:10	2.44	25.98	0.45	42.48	1.47	44.84	0.96	47.00	2.19	27.55	2.23	56.02
12:15	3.53	40.24	0.64	42.11	1.69	45.36	1.10	45.49	2.85	28.73	2.81	44.83
12:20	4.74	51.77	2.16	32.93	1.59	39.74	1.64	44.51	2.90	32.88	3.16	41.98
12:25	5.36	56.41	2.98	28.21	1.75	39.64	1.75	41.85	2.52	37.72	3.05	41.96
12:30	4.73	188.59	2.85	23.49	1.70	43.85	1.71	40.55	2.87	46.08	2.99	41.83
12:40	3.07	51.51	2.50	35.00	1.90	50.72	1.86	53.42	2.87	58.48	2.97	42.39
Hersh												
9:53	1.23	15.44	1.43	13.30	1.10	20.66	0.44	26.29	1.41	12.72	1.65	25.69
9:58	1.59	15.70	1.63	10.68	1.40	24.26	1.36	25.43	1.95	14.40	2.14	27.71
10:03	1.79	19.76	1.68	11.91	1.62	24.42	1.59	18.87	2.18	20.05	2.42	34.38
10:08	2.12	22.96	2.07	18.33	1.88	28.90	1.73	23.72	2.30	17.19	2.61	34.18
10:13	2.60	23.64	2.59	28.59	1.95	23.38	2.02	17.62	2.84	18.87	2.95	37.17
10:18	2.82	30.14	2.64	33.07	2.45	33.81	2.40	17.67	2.59	19.68	3.04	46.99
10:23	2.75	23.64	2.62	31.46	2.51	35.91	2.52	17.81	2.96	20.37	3.32	40.96
10:28	2.78	32.29	2.81	36.79	2.32	35.54	2.40	17.34	2.95	23.67	3.24	36.32
10:33	2.59	30.93	2.42	40.16	2.15	39.84	2.28	25.39	2.68	29.86	3.07	37.48
Keith												
10:28	2.51	43.29	2.02	56.44	1.16	44.56	1.93	18.23	1.52	36.81	1.81	28.31
10:33	3.52	31.35	3.21	37.70	1.95	36.29	3.24	29.74	3.14	30.56	3.25	27.43
10:39	3.54	29.13	3.45	47.30	3.24	38.55	3.72	28.28	3.22	30.36	3.46	27.93
10:43	3.67	33.04	3.61	52.21	3.04	39.53	3.61	35.41	3.55	36.18	3.48	28.92
10:48	3.85	35.29	3.88	50.72	3.14	39.00	3.76	51.81	3.85	33.55	3.73	28.74
10:53	3.81	35.53	3.74	49.57	3.63	37.08	4.11	59.70	3.85	32.80	3.92	30.55
10:59	3.92	35.66	3.77	46.72	3.44	39.15	3.57	38.92	3.67	35.80	3.60	32.10
Amarillo												
1:06	1.93	49.43	2.28	49.33	2.17	49.02	2.21	40.05	0.35	14.31	1.39	19.48
1:11	2.70	76.70	2.64	58.47	2.57	90.89	2.51	35.95	2.64	40.82	2.06	24.06
1:16	2.90	62.65	2.90	49.51	2.93	51.71	2.78	58.37	2.02	35.84	2.34	40.33
1:21	3.25	53.77	3.17	32.03	3.27	71.11	2.93	64.29	2.33	31.32	2.57	28.82
1:26	3.08	66.12	2.78	42.33	3.07	74.82	2.99	69.15	2.50	29.48	2.56	25.53
1:31	3.00	72.12	2.97	52.56	2.79	75.48	2.97	109.99	2.70	31.27	2.76	27.42

RAIN ONLY DATA FOR RILLS

Time	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
hr:mn	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l
Amarillo												
1:36	3.47	88.61	3.27	42.29	3.22	74.48	3.54	101.32	2.72	30.64	2.57	27.06
1:41	3.72	92.88	3.47	55.73	3.55	29.71	3.56	107.75	2.84	31.63	2.85	28.03
1:46	3.72	72.41	0.00	37.26	3.55	35.76	3.52	100.97	3.20	30.78	2.58	32.77
Woodward												
1:22	0.92	133.84	1.68	147.03	0.05	116.90	0.26	110.45	0.50	129.10	0.16	103.40
1:27	2.20	139.95	2.05	125.11	1.31	109.76	1.50	83.55	1.49	144.08	1.55	175.66
1:32	2.56	177.30	2.33	135.63	2.03	119.34	1.90	105.06	1.95	157.09	2.07	161.93
1:37	3.06	181.77	2.60	165.46	2.22	154.63	2.19	115.13	2.27	209.44	2.39	197.86
1:42	3.21	244.62	3.00	171.44	2.89	193.00	2.58	145.09	2.60	275.14	2.55	237.81
1:47	3.70	197.25	3.29	219.33	3.50	171.49	2.98	139.17	2.82	224.79	2.96	218.24
1:52	3.85	281.58	3.80	183.05	3.47	194.56	3.08	145.51	3.28	254.21	3.19	279.99
1:57	3.95	240.90	4.11	168.04	3.05	178.33	2.89	142.71	3.48	266.17	3.38	301.11
2:02	3.36	223.05	2.88	159.91	2.89	162.17	2.81	142.95	2.92	227.19	2.84	229.55
Heiden												
2:00	0.80	13.69	6.09	46.90	2.44	37.47	5.29	36.88	1.84	45.32	0.64	4.62
2:05	2.01	37.12	6.10	31.99	2.90	33.64	4.96	25.93	5.49	63.88	1.83	4.81
2:10	2.09	54.82	5.89	35.47	2.95	35.97	5.19	21.59	5.52	40.17	1.71	4.90
2:15	2.30	59.21	5.87	26.98	2.92	35.32	5.00	19.12	5.28	37.42	1.63	3.95
2:20	2.17	38.32	5.61	26.06	2.87	29.61	4.77	17.95	5.24	31.21	1.60	13.74
2:25	2.12	33.72	5.45	24.85	2.76	24.95	4.51	17.39	5.25	18.80	1.64	13.90
2:30	2.20	35.22	5.25	29.88	2.67	25.57	4.30	15.97	5.06	32.26	1.60	15.55
2:35	2.54	48.21	5.37	24.22	3.11	25.80	4.57	17.36	5.26	19.86	1.59	17.82
2:40	2.69	46.35	5.23	18.63	3.05	14.73	4.58	14.89	5.04	31.63	1.49	22.13
Whitney												
2:00	1.45	56.05	1.54	42.76	1.19	78.40	0.92	72.37	2.29	124.38	1.78	28.21
2:05	2.00	165.93	1.82	61.48	1.69	81.53	1.72	102.37	3.22	80.67	1.75	49.00
2:11	2.46	90.85	2.54	95.03	2.23	65.65	2.15	66.50	4.44	65.12	2.38	75.56
2:15	2.54	98.64	2.48	92.53	2.39	77.54	2.13	72.96	4.25	109.95	2.45	84.72
2:20	2.68	104.27	2.64	79.09	2.50	66.75	2.34	65.65	2.24	80.77	2.57	80.29
2:26	2.91	78.19	2.80	90.10	2.66	64.84	2.51	69.78	2.55	93.45	2.90	83.49
2:30	2.96	82.66	3.02	92.25	2.79	53.53	2.40	84.00	2.63	81.88	2.85	80.67
2:35	2.97	85.30	3.07	88.29	2.91	67.34	2.60	73.17	2.73	74.79	2.94	76.12
2:40	3.01	79.66	3.01	81.90	2.95	58.93	2.62	71.68	2.69	77.97	3.00	73.26

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time hr:mn	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l
Academy												
1:58	2.73	19.91	1.70	23.66	0.82	20.39	0.92	19.57	1.17	33.90	2.69	27.43
2:03	2.86	21.32	2.70	22.79	2.13	20.14	1.10	19.21	2.67	39.66	2.73	33.59
2:08	2.58	22.03	3.50	31.36	2.84	16.81	2.81	17.97	2.85	40.28	3.15	47.55
2:13	3.66	24.12	3.58	32.65	2.30	16.77	2.84	17.18	3.21	46.13	3.27	38.26
2:18	3.49	33.23	3.46	36.10	2.84	19.96	3.25	21.78	2.99	41.52	3.00	51.37
2:23	4.00	35.69	3.83	35.26	3.06	25.42	3.33	23.71	2.97	44.30	2.99	55.11
2:28	3.84	33.82	3.67	40.79	3.04	26.79	3.29	24.08	3.26	45.76	3.13	48.85
2:33	3.68	29.98	3.75	38.71	3.20	31.12	3.23	25.85	3.16	42.84	3.10	42.91
2:38	4.08	34.96	3.92	39.67	3.47	29.42	3.16	25.83	3.19	45.64	3.17	50.09
Los Banos												
4:11	0.23	43.24	0.35	48.55	*No Sample Taken*				0.35	67.19	0.23	38.97
4:21	0.23	29.82	0.55	48.56	0.49	30.37	0.39	35.74	0.44	48.76	0.25	31.03
4:31	0.24	25.89	0.89	43.53	0.64	27.50	0.54	26.49	1.00	40.45	1.49	27.16
4:36	1.23	23.86	0.27	42.95	0.66	24.74	0.56	28.56	0.94	45.16	1.48	28.78
4:41	1.86	21.59	0.36	41.04	0.68	25.11	0.69	30.01	1.25	42.93	1.95	32.10
4:46	2.36	22.43	0.43	26.26	0.62	22.79	*Spilled Sample*		1.27	43.29	1.84	29.24
4:51	2.34	16.44	1.55	14.24	0.78	21.10	1.21	27.41	1.51	52.75	2.12	29.98
4:56	3.01	21.78	1.99	17.47	0.77	25.18	1.62	24.04	1.38	50.85	1.79	25.72
Portneuf												
10:38	0.17	17.41	0.19	78.99	1.77	17.06	0.28	30.18	0.95	20.63	0.77	14.19
10:55	2.25	17.05	0.55	51.12	0.97	80.25	0.49	37.81	0.35	61.99	0.53	21.39
11:00	2.34	15.74	2.65	39.54	2.22	40.04	0.47	82.16	2.47	34.74	0.81	19.12
11:05	2.39	16.44	2.54	37.59	2.24	33.18	2.21	28.73	2.15	30.81	0.77	20.68
11:10	2.34	16.81	2.61	36.83	2.27	32.69	2.24	24.96	2.57	36.40	1.60	22.17
11:15	2.43	18.48	2.58	40.63	2.30	31.54	2.11	35.52	2.85	34.64	2.79	25.93
11:18	2.37	20.79	2.73	43.39	2.30	32.06	2.26	38.70	2.63	35.78	2.47	26.65
Nansene												
10:53	2.19	126.73	0.68	91.99	0.48	72.86	0.50	132.22	2.41	105.68	0.52	53.97
10:58	2.49	144.92	2.03	126.24	1.42	83.08	1.34	88.72	4.46	152.33	1.68	50.32
11:03	2.63	132.28	2.84	182.33	2.04	113.83	2.15	122.58	2.45	154.62	1.87	73.77
11:08	2.97	156.41	3.07	169.77	1.01	119.25	2.56	150.49	2.25	172.95	1.79	130.51
11:13	2.77	137.62	3.32	175.42	2.32	147.98	2.43	172.25	2.89	157.22	3.03	195.28
11:18	2.90	157.57	3.15	182.64	1.95	172.17	2.54	161.84	2.48	154.38	2.91	180.32
11:23	3.47	165.21	3.85	170.46	2.94	154.01	3.33	155.92	2.96	118.89	3.03	163.31
11:28	3.21	155.85	3.86	158.65	2.89	151.62	3.01	119.79	3.23	134.60	3.10	135.08
11:33	3.36	135.37	3.82	148.04	3.00	137.67	3.27	127.45	3.30	116.32	3.35	128.51

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.
hr:mn	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l
Palouse												
1:03	2.40	92.98	1.72	97.46	2.05	86.46	0.61	127.34	1.65	90.08	0.40	87.45
1:10	3.14	160.89	2.50	139.40	2.39	116.60	2.21	133.66	2.19	93.45	0.59	90.60
1:15	3.63	154.70	3.25	134.57	3.12	133.05	3.04	140.82	2.54	96.14	2.42	68.20
1:20	3.43	158.72	3.27	136.28	3.00	140.79	2.81	144.75	2.82	91.49	2.53	81.72
1:25	3.54	168.36	3.35	144.38	3.13	153.86	3.09	133.69	3.04	90.74	2.97	85.90
1:30	3.96	150.42	3.79	129.40	3.94	145.95	3.93	141.07	2.86	106.64	3.15	85.17
1:35	4.09	126.58	3.80	129.82	3.74	125.76	3.50	130.04	3.26	110.26	3.20	86.01
1:40	4.11	127.51	4.00	121.23	3.53	114.71	3.86	126.05	3.17	98.04	3.32	94.91
Zahl												
12:11	2.13	26.35	1.90	55.64	1.47	38.39	1.90	94.33	0.75	39.64	0.58	96.68
12:16	2.47	27.87	2.69	51.47	1.92	29.87	2.40	35.33	1.79	50.68	1.89	49.41
12:21	2.50	42.77	3.17	61.32	2.21	42.60	2.37	48.29	2.12	49.55	2.23	38.60
12:26	2.67	46.34	3.30	57.93	2.31	43.07	2.84	49.02	2.32	43.87	2.55	44.35
12:31	*No Sample Taken*		3.47	54.70	2.48	41.71	3.04	50.30	2.38	46.93	2.54	45.66
12:36	3.14	57.92	3.28	61.73	2.59	42.32	3.04	53.67	2.58	47.34	2.62	45.90
12:41	2.98	60.41	3.43	59.76	2.56	44.94	3.12	54.75	2.44	44.34	2.69	41.33
12:46	2.89	56.82	3.62	58.22	2.47	46.74	3.02	54.68	2.55	49.22	2.80	43.60
Pierre												
11:56	0.58	96.24	2.28	75.40	0.83	45.41	0.78	47.94	*No Sample Taken*			
12:01	2.50	45.99	2.89	80.18	1.99	66.34	1.40	42.59	0.56	46.71	0.52	13.86
12:06	3.49	52.39	3.06	51.20	2.75	60.51	2.61	51.72	2.10	39.96	0.78	67.66
12:11	4.10	44.63	3.31	62.47	3.10	59.23	2.76	48.61	3.05	33.30	2.50	28.95
12:16	4.13	54.80	3.22	61.68	3.23	56.70	3.03	43.74	3.33	58.03	2.97	49.59
12:21	3.69	58.37	3.37	58.88	3.48	59.61	3.26	48.05	3.51	56.12	2.98	44.06
12:26	3.50	57.65	3.31	56.90	3.59	54.88	3.10	55.20	3.40	54.30	3.06	54.34
12:31	3.78	55.41	3.30	52.10	3.52	50.35	3.32	48.55	3.54	48.69	3.17	46.99
Williams												
1:07	1.54	32.29	0.59	39.86	1.07	19.92	0.48	17.25	1.67	41.35	1.10	46.63
1:12	2.75	24.56	1.38	37.16	8.10	23.79	1.24	23.03	2.81	30.21	2.07	44.23
1:17	2.99	23.42	2.61	44.06	2.92	20.97	2.48	20.88	3.00	25.78	2.62	26.03
1:22	3.12	30.53	2.58	23.58	2.77	13.25	2.59	22.82	2.97	25.50	2.78	26.98
1:27	3.06	26.70	3.02	21.07	3.03	26.96	2.94	26.37	3.21	26.86	2.92	27.96
1:32	3.39	19.47	3.01	19.92	3.11	23.39	2.85	20.70	3.08	28.02	2.66	25.72
1:37	3.59	16.75	3.10	20.44	3.13	24.59	3.03	22.47	3.27	26.01	3.17	22.14

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time hr:mn	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l
Barnes - ND												
12:47	0.09	65.61	1.17	45.96	0.56	19.33	3.78	31.91	0.44	48.06	0.66	32.54
12:52	1.61	25.39	2.06	26.94	0.82	16.46	1.33	29.03	0.77	79.65	1.53	22.99
12:57	2.04	23.63	2.25	21.62	1.87	24.07	1.85	27.83	1.87	29.97	1.85	21.91
1:02	2.50	21.64	2.33	29.60	3.18	48.24	2.05	27.43	2.38	28.51	2.02	27.11
1:07	2.45	20.52	2.46	38.17	2.08	41.27	2.51	25.07	2.85	35.54	2.38	30.87
1:12	2.69	24.93	2.64	41.14	2.55	30.72	2.21	50.68	2.63	35.84	2.23	32.19
1:17	2.94	25.56	2.86	40.15	2.66	40.95	2.39	31.12	2.76	38.21	2.39	31.24
1:22	2.89	36.44	2.70	38.36	2.69	43.16	2.44	29.85	2.99	42.24	2.46	37.26
1:27	3.03	33.09	2.93	38.70	2.82	44.35	2.59	35.61	2.77	42.81	2.49	35.18
Sverdrup												
9:23	1.56	46.75	0.91	75.95	0.92	52.75	0.72	40.86	*No Sample Taken*			
9:28	1.91	48.58	1.15	79.31	1.14	29.28	1.00	50.11	0.42	72.75	0.71	51.78
9:33	2.13	39.01	1.45	39.64	1.50	49.90	1.29	48.35	0.75	54.42	0.86	48.25
9:38	2.26	32.54	1.55	35.12	1.73	37.23	1.43	49.50	0.89	16.12	1.05	21.92
9:43	2.36	29.77	1.72	33.98	1.86	34.99	1.67	53.61	1.02	16.47	1.15	21.08
9:48	2.62	29.11	2.01	29.87	2.20	34.09	1.98	39.04	1.34	22.11	1.29	33.31
9:53	2.75	32.33	2.14	31.23	2.23	34.01	2.03	40.66	1.54	37.76	1.40	40.22
9:58	2.59	35.97	2.14	33.59	2.30	31.00	2.08	42.95	1.58	40.57	1.56	46.92
10:03	2.86	35.58	2.36	31.83	2.43	30.65	2.23	33.87	1.77	39.74	1.75	43.78
10:08	2.88	35.63	2.19	37.08	2.59	33.84	2.20	32.21	1.81	47.40	1.71	43.78
Barnes - MN												
9:15	1.57	28.28	1.07	44.05	0.30	26.14	0.41	40.33	0.13	57.29	0.60	47.71
9:20	2.12	39.74	1.63	61.15	1.23	46.81	0.66	50.25	0.68	21.99	1.20	70.33
9:25	2.42	51.52	1.93	67.24	1.69	47.01	1.25	51.99	1.53	30.77	1.62	41.63
9:30	2.62	67.56	2.18	57.49	2.13	56.95	1.71	56.95	1.78	34.83	1.83	44.10
9:35	2.86	69.83	2.40	59.03	2.36	49.94	1.90	53.53	2.06	43.29	2.01	49.85
9:40	2.97	66.98	2.46	68.21	2.56	44.94	2.18	57.23	2.27	49.90	2.28	49.44
9:45	3.06	64.07	2.59	54.04	2.61	48.11	2.18	58.15	2.32	48.48	2.29	45.94
9:50	3.13	69.95	2.65	66.94	2.88	47.80	2.39	59.72	2.52	50.59	2.40	45.08
9:55	3.29	71.52	2.98	58.72	3.31	51.05	2.77	57.90	2.99	50.93	2.79	40.92
Mexico												
12:53	1.18	40.73	2.17	36.59	1.20	49.77	0.95	12.60	0.61	36.28	0.61	42.62
12:59	2.42	41.73	2.26	53.89	2.10	57.33	1.06	30.81	0.89	39.45	1.74	65.11
1:04	2.61	46.05	2.58	55.91	2.36	50.11	2.51	28.23	1.97	48.55	1.94	54.33
1:09	3.04	52.24	3.01	56.05	2.75	67.88	2.80	39.44	2.38	39.03	2.45	55.92

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time hr:mn	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l
Mexico												
1:14	2.96	46.62	3.03	56.73	2.78	71.86	2.77	38.17	2.64	51.29	2.55	57.35
1:19	3.07	47.62	3.23	66.40	2.98	66.11	2.88	39.90	2.59	47.00	2.61	54.10
1:24	3.42	50.61	3.50	65.05	3.30	62.55	3.36	51.32	2.73	45.49	2.69	54.13
1:29	3.33	60.66	3.31	81.22	3.21	60.22	3.35	54.84	2.80	47.45	2.87	58.54
Grenada												
12:10	0.46	28.63	0.22	43.56	0.41	45.19	0.20	28.54	0.20	14.52	0.24	82.72
12:15	1.82	28.22	1.58	35.76	0.76	73.20	0.72	99.31	0.60	25.03	0.79	62.82
12:20	2.55	30.99	2.43	55.43	1.91	45.72	2.33	38.35	0.74	25.33	1.70	57.40
12:25	2.83	68.24	2.78	75.27	2.41	77.77	2.59	68.37	1.98	53.66	2.12	70.60
12:30	2.94	76.62	3.01	85.81	2.72	70.32	2.81	68.12	2.15	71.93	2.41	62.52
12:35	3.31	86.88	3.35	86.02	2.95	81.37	3.13	71.04	2.52	61.37	2.83	32.91
12:41	3.41	76.01	3.53	80.04	3.19	76.29	3.33	66.74	2.80	66.03	2.97	71.93
12:45	3.44	74.19	3.74	80.85	3.13	69.19	3.31	69.37	2.74	68.54	3.02	65.57
12:50	3.48	74.17	3.72	77.01	3.28	70.87	3.39	69.52	2.93	84.84	3.12	67.46
Tifton												
1:34	1.46	5.85	1.54	11.57	1.08	4.42	0.93	5.67	0.94	*Samples Lost*	0.48	*Samples Lost*
1:39	1.77	4.52	1.88	6.57	1.55	3.41	1.38	5.95	1.55		1.30	
1:44	2.22	7.23	2.06	6.43	1.86	15.66	1.84	4.52	1.83		1.87	
1:52	2.07	5.17	1.90	9.76	1.90	4.78	1.80	18.18	2.04		2.06	
1:57	2.37	14.63	2.01	12.61	2.01	5.10	1.80	7.90	1.97		2.03	
2:04	2.29	8.18	2.04	13.36	2.02	4.55	1.90	6.43	1.90		1.84	
Bonifay												
	No runoff from rills during rain only period.											
Cecil												
9:52	0.91	18.03	0.87	17.87	0.61	26.58	1.10	12.65	0.84	13.63	0.84	25.68
9:58	2.84	16.30	2.85	20.80	1.75	16.94	1.43	14.29	0.95	14.82	1.07	23.40
10:03	2.73	13.57	2.67	16.18	2.67	14.21	2.55	18.42	1.61	16.15	1.63	16.16
10:07	2.93	12.63	3.26	12.92	3.40	10.06	3.28	9.60	1.94	15.63	2.46	14.75
10:13	3.50	12.60	3.75	13.22	3.58	10.30	3.47	8.89	2.72	16.53	2.78	13.35
10:18	3.65	20.14	3.57	15.40	4.10	11.72	3.93	8.16	2.92	20.78	2.96	11.91
10:22	3.91	21.46	3.63	16.03	3.92	10.27	3.62	8.87	3.04	24.76	2.98	12.91
10:27	3.63	29.24	3.65	17.70	4.02	10.38	3.98	10.06	3.01	20.82	2.96	11.70

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.	Flow	Conc.
hr:mn	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l	l/mn	g/l
Hiwassee												
10:44	3.32	29.51	3.12	42.63	2.42	55.89	2.73	18.81	2.35	66.63	2.24	46.73
10:49	3.36	32.23	3.32	48.86	3.15	37.80	2.63	20.30	2.75	41.85	2.22	34.40
10:54	3.57	34.60	3.58	50.45	2.97	55.73	2.90	26.16	3.20	44.10	2.95	39.45
10:59	3.85	35.61	3.79	45.78	3.05	65.11	3.45	26.65	3.15	46.30	2.96	35.46
11:05	3.62	45.07	3.60	38.67	*Spilled*	*Sample*	3.50	33.10	3.03	43.51	3.23	46.68
11:10	4.05	38.91	3.78	38.03	3.57	64.99	3.94	33.95	3.37	41.42	3.15	55.63
11:15	3.81	39.67	3.62	39.79	3.51	35.76	3.54	39.47	3.43	44.44	3.41	46.98
Gaston												
1:38	0.26	15.92	0.56	36.37	0.62	30.20	1.46	39.10	0.84	18.81	0.62	19.78
1:44	0.29	38.04	0.98	42.05	1.75	32.40	1.73	42.82	2.47	19.93	0.83	25.89
1:49	2.90	21.97	3.59	30.18	3.24	33.88	2.69	28.41	3.34	33.49	0.95	20.83
1:54	3.50	24.51	3.91	23.41	3.68	32.22	3.25	43.86	3.55	24.09	1.16	21.04
1:58	3.29	22.92	3.24	39.00	3.43	27.14	2.86	33.91	3.31	24.87	1.76	33.39
Opaquon												
1:58	3.41	110.74	2.58	77.78	0.66	52.33	0.72	68.86	0.24	21.17	0.99	42.53
2:03	3.62	95.27	3.69	108.81	0.87	55.24	2.25	85.78	1.11	53.82	2.37	82.31
2:08	3.90	103.90	3.89	88.72	2.63	75.95	3.01	109.48	2.17	82.41	3.00	91.46
2:13	3.95	95.78	4.29	87.23	3.50	61.66	3.17	93.80	2.79	77.98	3.13	87.98
2:18	4.23	92.01	4.36	76.01	3.86	62.96	3.43	89.41	3.18	70.19	3.34	88.21
2:23	4.31	81.18	4.41	73.61	4.05	64.35	3.60	66.99	3.91	71.58	3.52	66.87
2:27	3.41	59.44	3.83	53.49	3.44	53.48	3.02	49.09	3.50	56.75	3.21	60.50
2:33	4.08	80.01	4.28	65.87	4.10	62.84	3.56	68.40	3.74	66.38	3.75	69.64
Frederick												
2:27	3.13	86.17	2.97	98.46	2.50	84.74	2.49	92.03	2.14	61.37	1.90	57.60
2:31	3.31	84.97	3.25	93.03	2.85	81.42	2.99	90.38	2.47	51.71	2.36	58.06
2:34	3.48	95.39	3.38	87.82	2.85	83.01	3.12	84.59	2.55	78.39	2.64	70.66
2:37	3.50	84.09	3.51	88.53	2.91	78.32	3.14	76.47	2.77	75.40	2.58	71.99
2:40	3.47	81.02	3.38	78.91	2.96	70.60	3.15	67.35	2.70	75.08	2.66	70.88
2:44	3.62	77.42	3.56	82.94	3.08	77.47	3.40	73.94	2.94	62.09	2.80	60.14
2:46	3.63	77.50	3.64	81.05	3.18	62.10	3.35	73.64	2.98	58.21	2.87	66.62
2:50	3.77	74.45	3.78	75.80	3.16	58.06	3.47	67.34	3.09	57.85	2.95	61.44
Manor												
1:44	3.13	54.85	2.59	43.21	1.32	40.04	1.65	64.81	0.00	51.87	0.90	106.63
1:50	3.68	61.57	3.40	89.24	2.98	63.47	2.66	64.74	3.10	50.53	2.64	54.73
1:55	4.23	71.02	3.63	88.48	3.54	69.76	3.15	71.43	3.41	55.73	3.12	54.52
2:00	4.49	73.39	3.89	83.65	4.08	57.59	3.57	74.41	3.74	52.09	3.43	71.60
2:04	4.67	71.96	4.17	91.83	3.85	53.54	3.50	63.76	3.72	50.61	3.48	63.67

RAIN ONLY DATA FOR RILLS

	Rill 1		Rill 2		Rill 3		Rill 4		Rill 5		Rill 6	
Time hr:mn	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l	Flow l/mn	Conc. g/l
Caribou												
10:47	2.02	27.85	2.22	59.92	0.86	47.35	1.73	41.44	2.46	51.25	3.18	73.88
10:54	2.61	35.77	2.69	49.55	2.45	68.58	2.41	33.87	2.94	41.27	2.84	39.64
10:57	3.15	36.58	2.98	55.14	2.79	40.46	2.93	51.05	3.06	53.86	2.84	44.01
11:02	3.53	49.72	3.30	47.42	3.29	42.51	3.81	45.43	3.28	46.17	3.18	42.83
11:07	3.50	42.07	3.28	49.51	3.19	56.56	2.94	47.60	3.41	39.05	3.12	48.86
11:12	3.70	43.27	3.48	51.21	3.52	42.68	3.32	39.20	3.46	43.66	3.29	45.58
11:17	3.83	34.72	3.53	44.71	3.42	40.89	3.16	42.34	3.68	47.11	3.39	39.57
Collamer												
12:46	3.05	91.56	2.62	125.32	2.06	123.61	1.65	115.12	1.20	163.43	1.38	169.25
12:51	3.40	126.47	2.98	110.15	2.88	100.92	2.74	106.11	2.67	107.75	2.81	120.61
12:56	4.04	109.50	3.61	96.69	3.44	102.93	2.67	99.63	3.12	130.89	2.96	96.97
1:01	3.93	107.54	3.45	88.67	3.86	107.47	3.53	94.80	3.44	136.49	3.11	105.80
1:06	4.16	105.74	3.66	95.59	3.51	130.90	3.27	83.38	3.42	154.56	3.24	100.06
1:11	4.30	104.54	3.69	83.14	3.50	104.13	3.25	78.74	3.58	114.44	3.26	103.71
1:16	4.47	97.12	3.91	79.01	4.01	119.58	3.61	83.42	3.44	103.28	3.24	81.69
Miamian												
4:29	0.23	21.61	0.20	24.99	*No Sample Taken*		0.52	32.00	0.60	35.62	0.59	37.68
4:34	0.70	29.44	0.77	18.24	0.81	54.07	0.99	34.78	0.67	49.94	0.53	35.34
4:39	1.88	29.69	1.99	24.94	0.99	49.23	1.34	34.32	0.99	55.25	0.81	32.51
4:44	2.63	24.97	2.81	43.04	1.15	43.41	2.40	54.89	0.97	61.74	0.93	33.17
4:49	3.37	49.37	3.20	42.50	2.27	54.54	2.75	49.06	1.79	55.99	0.96	38.51
4:54	3.77	56.16	3.86	42.02	3.10	43.17	3.22	50.39	3.32	35.36	2.21	55.50
4:59	3.78	65.54	4.22	40.96	3.45	44.68	3.53	59.36	3.84	58.99	2.72	34.32
Lewisburg												
10:15	2.56	85.46	2.51	63.71	2.72	71.04	1.52	56.67	0.32	31.25	0.76	44.54
10:20	2.98	70.99	3.51	69.02	3.39	56.95	2.55	64.06	1.75	49.07	1.84	90.15
10:25	3.30	76.50	3.87	60.78	3.45	63.52	2.86	55.83	3.06	34.70	2.32	89.51
10:30	3.40	63.73	4.11	63.55	3.47	56.49	3.12	54.77	3.20	53.18	2.70	90.92
10:35	3.81	61.51	4.53	55.84	3.97	50.70	3.73	49.12	2.78	54.73	3.29	87.25
10:40	3.68	54.73	4.40	52.01	3.91	47.32	3.52	45.06	3.53	52.51	3.20	73.34
Miami												
2:29	0.95	56.19	2.13	53.87	1.05	32.94	0.92	93.16	2.21	65.53	1.46	92.46
2:34	2.07	47.49	2.52	50.49	1.07	32.69	2.34	47.98	2.71	67.06	2.52	62.00
2:39	2.80	47.76	2.86	40.68	2.50	28.59	2.26	46.39	2.69	67.67	2.33	54.71
2:44	3.16	35.39	3.10	42.75	2.76	34.88	2.67	41.35	2.95	101.56	2.60	48.11
2:49	3.35	32.54	3.09	52.04	3.13	39.95	3.04	40.75	2.99	69.23	2.76	56.34
2:54	3.29	27.42	3.28	54.27	3.17	55.59	3.08	50.16	2.79	63.78	3.07	54.12
2:59	3.33	41.68	3.28	51.35	3.13	46.01	3.29	43.90	2.89	81.43	2.87	56.72

RILL DATA ANALYSIS SOIL: SHARPSBURG DATE: MAY 19, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 76.54 Kinematic Viscosity = 1.31 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 25.93 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 5.9 %														
R+2	9.3	30.7	0.31	0.21	7.3	0.91	5.7	4.8	5.25	53	3.04	6.24	6.72	0.93	1479
R+2	9.4	29.8	0.31	0.21	7.3	0.81	4.4	4.6	4.68	34	4.10	7.66	7.66	0.83	1317
R+4	15.4	21.2	0.38	0.26	9.9	1.01	7.0	5.5	5.81	75	2.40	6.23	6.94	0.68	2007
R+4	15.5	21.9	0.38	0.26	9.9	1.01	7.0	5.7	5.84	76	2.39	6.56	7.22	0.69	2016
R+6	16.1	23.3	0.38	0.26	10.3	1.04	7.1	6.3	6.00	80	2.37	7.45	8.03	0.71	2069
R+6	14.6	25.2	0.38	0.26	9.3	0.97	7.0	6.1	5.60	71	2.42	7.36	7.78	0.66	1933
R+6	16.1	23.3	0.38	0.26	10.3	0.80	12.2	6.3	4.61	92	1.20	4.52	4.83	0.54	1592
R+6	14.6	25.2	0.38	0.26	9.3	0.74	12.0	6.1	4.26	81	1.23	4.45	4.62	0.50	1470
R+8	26.3	38.2	0.41	0.28	15.6	1.10	13.2	16.8	6.33	160	1.08	13.08	13.41	0.64	2358
R+8	27.5	30.8	0.41	0.28	16.3	1.13	13.3	14.1	6.54	170	1.07	10.74	11.14	0.66	2434
R+10	34.6	23.6	0.43	0.30	19.5	1.29	13.8	13.6	7.44	215	1.01	9.91	10.43	0.68	2906
R+10	31.2	33.0	0.43	0.30	17.6	1.20	13.5	17.2	6.93	189	1.04	13.10	13.53	0.64	2705
F+2	3.9	0.7	0.21	0.14	4.5	0.44	9.9	0.0	2.52	30	0.00	0.05	0.00	0.97	481
F+2	4.1	0.8	0.21	0.14	4.8	0.46	10.0	0.1	2.67	33	0.00	0.06	0.00	1.03	509
F+4	13.4	15.6	0.30	0.21	10.8	0.83	12.3	3.5	4.79	99	0.00	3.15	3.20	0.90	1306
F+4	12.6	16.8	0.30	0.21	10.2	0.79	12.2	3.5	4.58	91	0.00	3.24	3.30	0.87	1248
F+6	19.4	15.4	0.37	0.25	12.7	0.94	12.6	5.0	5.43	123	0.00	4.37	4.46	0.67	1826
F+6	19.0	18.3	0.37	0.25	12.4	0.93	12.6	5.8	5.34	119	0.00	5.12	5.25	0.66	1795
F+6	19.4	15.4	0.37	0.25	12.7	1.22	7.2	5.0	7.05	103	0.00	7.71	7.90	0.88	2370
F+6	19.0	18.3	0.37	0.25	12.4	1.21	7.1	5.8	6.97	100	0.00	9.08	9.35	0.86	2342
F+8	28.0	23.8	0.40	0.27	17.0	1.37	8.5	11.1	7.91	145	0.00	14.53	15.12	0.84	2873
F+8	25.8	19.8	0.40	0.27	15.7	1.30	8.4	8.5	7.50	132	0.00	11.30	11.68	0.80	2724
F+10	35.6	34.5	0.45	0.31	19.2	1.48	8.7	20.5	8.55	166	0.00	26.17	27.93	0.72	3496
Rill 2	slope = 5.9 %														
R+0	8.6	31.5	0.28	0.19	7.5	0.78	8.6	4.5	4.50	63	1.87	3.95	3.95	0.97	1144
R+2	9.3	36.0	0.28	0.19	8.1	0.83	8.7	5.6	4.79	70	1.85	5.30	5.30	1.04	1219
R+2	14.6	31.9	0.37	0.25	9.6	0.95	8.8	7.8	5.47	87	1.82	7.94	8.09	0.68	1840
R+4	15.8	34.8	0.37	0.25	10.4	1.01	8.9	9.2	5.81	96	1.80	9.62	9.82	0.72	1953
R+4	15.7	25.7	0.37	0.25	10.3	1.00	8.9	6.7	5.77	95	1.80	6.57	7.09	0.72	1941
R+6	15.4	27.9	0.37	0.25	10.1	0.98	8.9	7.1	5.68	92	1.80	7.11	7.51	0.71	1910
R+6	15.7	25.7	0.37	0.25	10.3	0.99	9.1	6.7	5.74	96	1.75	6.43	6.95	0.71	1930
R+6	15.4	27.9	0.37	0.25	10.1	0.98	9.1	7.1	5.66	93	1.76	6.97	7.37	0.70	1901
R+6	26.5	34.6	0.38	0.26	16.9	1.41	10.0	15.3	8.15	178	1.56	15.44	16.24	0.96	2813
R+8	28.3	34.4	0.38	0.26	18.1	1.48	10.1	16.3	8.53	193	1.53	16.33	17.20	1.00	2944
R+8	33.5	29.8	0.44	0.30	18.5	1.50	10.2	16.6	8.64	198	1.52	16.65	17.52	0.76	3455
R+10	32.5	39.8	0.44	0.30	17.9	1.47	10.1	21.6	8.48	191	1.54	22.22	23.18	0.74	3388

RILL DATA ANALYSIS SOIL: SHARPSBURG DATE: MAY 19, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 5.9 %														
F+2	3.8	6.3	0.20	0.14	4.6	0.52	8.3	0.4	3.03	34	0.00	0.53	0.00	1.29	550
F+2	3.4	4.4	0.20	0.14	4.2	0.48	8.2	0.3	2.77	29	0.00	0.34	0.00	1.18	504
F+4	13.3	19.3	0.29	0.20	11.2	1.06	9.2	4.3	6.10	106	0.00	5.16	5.27	1.23	1607
F+4	13.1	28.7	0.29	0.20	11.0	1.04	9.2	6.3	6.02	104	0.00	7.58	7.82	1.22	1587
F+6	18.6	28.9	0.32	0.22	14.1	1.25	9.6	9.0	7.22	143	0.00	10.36	10.70	1.20	2098
F+6	18.6	26.1	0.32	0.22	14.1	1.25	9.6	8.1	7.20	142	0.00	9.34	9.62	1.19	2092
F+6	18.6	28.9	0.32	0.22	14.1	1.28	8.7	9.0	7.38	133	0.00	11.47	11.88	1.22	2145
F+6	18.6	26.1	0.32	0.22	14.1	1.27	8.7	8.1	7.36	133	0.00	10.35	10.68	1.22	2139
F+8	28.1	22.1	0.36	0.25	18.9	1.46	10.0	10.3	8.42	187	0.00	11.47	11.80	1.10	2754
F+8	25.7	32.1	0.36	0.25	17.3	1.37	9.9	13.7	7.92	169	0.00	15.40	16.06	1.04	2588
F+10	34.9	39.5	0.30	0.21	28.2	1.69	12.8	22.9	9.77	300	0.00	19.86	20.65	1.85	2663
F+10	35.7	27.0	0.38	0.26	22.8	1.58	11.1	16.0	9.12	234	0.00	16.08	16.65	1.07	3148
Rill 3	slope = 5.9 %														
R+0	7.4	25.0	0.25	0.17	7.2	0.81	8.0	3.1	4.70	62	2.06	2.24	2.94	1.28	1067
R+2	7.6	32.0	0.25	0.17	7.4	0.6828	10.3	4.1	3.94	62	1.49	2.87	0.00	1.07	895
R+2	18.2	27.5	0.35	0.24	12.6	0.94	11.9	8.4	5.44	115	1.24	6.60	7.28	0.75	1730
R+4	18.8	27.9	0.35	0.24	13.1	0.97	11.9	8.7	5.57	120	1.23	6.90	7.64	0.77	1772
R+4	20.5	38.6	0.36	0.25	13.8	1.01	12.1	13.2	5.82	130	1.21	10.90	11.72	0.76	1902
R+6	19.2	41.7	0.36	0.25	12.9	0.96	11.9	13.3	5.53	119	1.24	11.21	11.86	0.73	1809
R+6	20.5	38.6	0.36	0.25	13.8	0.89	13.7	13.2	5.12	122	1.02	9.66	9.97	0.67	1675
R+6	19.2	41.7	0.36	0.25	12.9	0.9430	12.5	13.3	5.44	121	1.16	10.71	11.30	0.71	1780
R+6	31.7	52.1	0.42	0.29	18.3	1.07	15.0	27.6	6.18	176	0.89	19.55	21.06	0.60	2358
R+8	31.7	50.2	0.42	0.29	18.3	1.07	14.9	26.5	6.18	176	0.90	18.80	20.22	0.59	2356
R+8	40.1	52.4	0.41	0.28	23.7	1.10	19.1	35.0	6.37	235	0.61	19.80	21.36	0.64	2372
R+10	40.9	43.5	0.41	0.28	24.2	1.11	19.3	29.7	6.42	241	0.60	16.47	17.64	0.65	2390
F+2	5.7	7.2	0.23	0.16	6.0	0.78	6.8	0.7	4.53	50	0.00	1.11	1.12	1.46	947
F+2	6.4	4.1	0.23	0.16	6.7	0.84	7.1	0.4	4.84	58	0.00	0.69	0.69	1.56	1012
F+4	16.6	20.2	0.33	0.23	12.2	0.92	12.0	5.6	5.32	113	0.00	5.17	5.30	0.83	1593
F+4	15.6	17.6	0.33	0.23	11.5	0.90	11.6	4.6	5.18	105	0.00	4.37	4.47	0.81	1552
F+6	19.7	17.5	0.36	0.25	13.2	0.86	13.6	5.7	4.96	115	0.00	4.67	4.80	0.65	1620
F+6	20.0	23.3	0.36	0.25	13.4	0.87	13.6	7.8	5.01	117	0.00	6.32	6.54	0.66	1640
F+6	19.7	17.5	0.36	0.25	13.2	1.06	10.4	5.7	6.14	121	0.00	6.12	6.27	0.80	2007
F+6	20.0	23.3	0.36	0.25	13.4	1.07	10.5	7.8	6.19	123	0.00	8.23	8.50	0.81	2023
F+8	28.2	30.6	0.38	0.26	18.0	1.15	13.3	14.4	6.63	174	0.00	12.01	12.54	0.78	2288
F+8	27.9	18.5	0.38	0.26	17.8	1.14	13.3	8.6	6.56	171	0.00	7.20	7.38	0.77	2266
F+10	38.4	41.9	0.42	0.29	22.2	1.35	13.8	26.8	7.77	228	0.00	21.64	23.02	0.75	2964
F+10	37.5	27.9	0.42	0.29	21.7	1.32	13.7	17.4	7.64	222	0.00	14.14	14.72	0.74	2914

RILL DATA ANALYSIS SOIL: SHARPSBURG DATE: MAY 19, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 5.9 %														
R+2	4.0	38.9	0.20	0.14	4.9	0.72	5.9	2.6	4.19	39	2.93	1.95	2.93	1.78	760
R+2	3.8	39.3	0.20	0.14	4.6	0.70	5.8	2.5	4.03	36	2.99	1.75	2.59	1.71	733
R+4	14.0	35.1	0.32	0.22	10.6	0.86	10.4	8.2	4.98	88	1.49	7.28	7.73	0.83	1449
R+4	14.6	38.2	0.32	0.22	11.1	0.89	10.4	9.3	5.16	94	1.47	8.43	8.91	0.86	1500
R+6	15.4	31.3	0.31	0.21	12.1	1.0374	10.4	8.1	5.99	117	1.47	7.11	7.98	1.06	1686
R+6	14.0	36.1	0.31	0.21	11.0	0.89	10.4	8.4	5.12	92	1.48	7.53	8.05	0.91	1442
R+6	15.4	31.3	0.31	0.21	12.1	1.24	7.3	8.1	7.17	108	2.28	9.93	11.29	1.27	2018
R+6	14.0	36.1	0.31	0.21	11.0	1.17	7.1	8.4	6.78	96	2.36	10.82	12.07	1.20	1909
R+8	23.1	54.5	0.38	0.26	14.7	0.9452	14.4	20.9	5.46	141	0.95	15.20	15.94	0.64	1884
R+8	28.0	74.3	0.38	0.26	17.9	1.1159	14.5	34.7	6.44	182	0.93	25.61	27.60	0.76	2224
R+10	36.0	41.9	0.41	0.28	21.3	1.2891	14.7	25.2	7.44	228	0.92	18.11	19.24	0.75	2772
R+10	34.8	55.9	0.41	0.28	20.6	1.2527	14.7	32.4	7.23	218	0.92	23.61	25.26	0.73	2693
F+2	3.8	2.7	0.20	0.14	4.6	0.67	5.8	0.2	3.85	33	0.00	0.33	0.00	1.63	699
F+2	4.3	2.0	0.20	0.14	5.2	0.73	5.9	0.1	4.21	39	0.00	0.27	0.00	1.79	764
F+4	13.7	23.4	0.27	0.19	12.3	1.25	7.4	5.3	7.24	110	0.00	8.02	8.22	1.69	1775
F+4	13.6	43.8	0.27	0.19	12.2	1.25	7.4	9.9	7.21	109	0.00	14.98	15.70	1.68	1768
F+6	17.0	28.0	0.33	0.23	12.5	1.27	7.4	7.9	7.31	112	0.00	11.87	12.31	1.14	2190
F+6	17.5	19.0	0.33	0.23	12.9	1.29	7.5	5.6	7.44	116	0.00	8.25	8.45	1.16	2229
F+6	17.0	28.0	0.33	0.23	12.5	1.09	9.7	7.9	6.32	118	0.00	9.07	9.38	0.99	1894
F+6	17.5	19.0	0.33	0.23	12.9	1.11	9.9	5.6	6.43	123	0.00	6.28	6.42	1.00	1926
F+8	26.4	42.0	0.37	0.25	17.3	1.30	11.2	18.5	7.53	178	0.00	18.25	19.26	0.94	2532
F+8	26.9	41.4	0.37	0.25	17.6	1.32	11.4	18.6	7.62	183	0.00	18.16	19.14	0.95	2560
F+10	35.0	34.0	0.42	0.29	20.2	1.37	12.6	19.8	7.90	214	0.00	17.48	18.34	0.76	3012
F+10	34.4	32.4	0.42	0.29	19.9	1.37	12.3	18.6	7.93	211	0.00	16.74	17.53	0.76	3025
Rill 5	slope = 5.3 %														
R+2	8.0	37.0	0.33	0.23	5.8	0.45	12.7	4.9	2.33	35	1.13	3.16	0.00	0.36	777
R+2	8.3	45.6	0.33	0.23	6.1	0.47	12.8	6.3	2.42	37	1.12	4.37	0.00	0.38	807
R+4	14.9	28.5	0.38	0.26	9.5	0.67	13.6	7.1	3.50	68	1.03	4.74	5.21	0.41	1344
R+4	15.0	30.7	0.38	0.26	9.6	0.68	13.6	7.7	3.51	69	1.02	5.21	5.66	0.41	1347
R+6	13.2	23.7	0.39	0.27	8.2	0.60	13.3	5.2	3.10	56	1.06	3.30	3.57	0.35	1224
R+6	13.1	23.4	0.39	0.27	8.1	0.59	13.3	5.1	3.08	55	1.07	3.20	3.45	0.34	1213
R+6	13.2	23.7	0.39	0.27	8.2	0.66	7.4	5.2	3.42	36	2.27	5.61	6.03	0.38	1350
R+6	13.1	23.4	0.39	0.27	8.1	0.65	7.4	5.1	3.39	35	2.27	5.43	5.83	0.38	1338
R+8	23.8	30.2	0.42	0.29	13.7	0.86	9.8	12.0	4.48	71	1.60	11.97	13.05	0.43	1902
R+8	24.8	28.6	0.42	0.29	14.3	0.88	10.1	11.8	4.58	75	1.55	11.52	12.61	0.44	1944
R+10	30.2	32.0	0.43	0.30	17.1	0.94	11.8	16.1	4.87	97	1.25	13.92	15.21	0.45	2117
R+10	28.2	33.3	0.43	0.30	15.9	0.91	11.3	15.6	4.70	88	1.33	14.10	15.38	0.43	2042

RILL DATA ANALYSIS SOIL: SHARPSBURG DATE: MAY 19, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 5.3 %														
F+2	5.8	0.6	0.21	0.14	6.7	0.8676	6.5	0.1	4.50	48	0.00	0.10	0.10	1.73	955
F+2	3.9	0.7	0.21	0.14	4.5	0.76	3.4	0.0	3.96	20	0.00	0.14	0.14	1.53	841
F+4	12.4	17.5	0.31	0.21	9.7	0.76	7.5	3.6	3.92	45	0.00	5.34	5.57	0.69	1229
F+4	11.7	13.2	0.31	0.21	9.2	0.72	7.5	2.6	3.74	41	0.00	3.84	3.97	0.66	1172
F+6	17.4	15.0	0.35	0.24	12.1	0.89	7.8	4.4	4.62	59	0.00	6.23	6.47	0.64	1636
F+6	17.4	14.9	0.35	0.24	12.1	0.89	7.8	4.3	4.62	59	0.00	6.17	6.41	0.64	1636
F+6	17.4	15.0	0.35	0.24	12.1	1.01	10.1	4.4	5.22	93	0.00	4.77	4.89	0.72	1847
F+6	17.4	14.9	0.35	0.24	12.1	1.01	10.2	4.3	5.22	93	0.00	4.73	4.84	0.72	1847
F+8	25.3	15.8	0.39	0.27	15.7	1.21	10.9	6.6	6.27	131	0.00	6.78	6.96	0.70	2472
F+8	25.4	17.2	0.39	0.27	15.8	1.2177	11.0	7.3	6.32	133	0.00	7.38	7.59	0.71	2491
F+10	33.2	26.3	0.43	0.30	18.7	1.19	13.3	14.5	6.15	155	0.00	12.15	12.75	0.57	2673
F+10	31.5	39.1	0.43	0.30	17.8	1.14	13.2	20.5	5.91	145	0.00	17.26	18.61	0.54	2568
Rill 6	slope = 5.3 %														
R+2	9.1	28.2	0.30	0.21	7.3	0.71	9.3	4.3	3.66	50	1.71	3.38	3.55	0.69	1111
R+2	9.4	30.2	0.30	0.21	7.6	0.71	9.6	4.8	3.69	52	1.63	3.85	3.93	0.70	1118
R+4	16.3	23.5	0.40	0.27	9.9	0.75	11.9	6.4	3.91	70	1.24	4.73	4.93	0.42	1581
R+4	16.2	23.9	0.40	0.27	9.8	0.75	11.9	6.5	3.90	70	1.24	4.81	4.99	0.41	1576
R+6	16.2	24.0	0.41	0.28	9.6	0.74	11.7	6.5	3.83	67	1.26	4.87	4.96	0.39	1589
R+6	15.6	22.9	0.41	0.28	9.2	0.72	11.6	5.9	3.75	64	1.29	4.41	4.47	0.38	1553
R+6	16.2	24.0	0.41	0.28	9.6	0.83	9.6	6.5	4.28	65	1.64	5.87	6.29	0.43	1775
R+6	15.6	22.9	0.41	0.28	9.2	0.80	9.6	5.9	4.15	62	1.65	5.25	5.64	0.42	1721
R+8	26.3	29.9	0.43	0.30	14.8	1.16	10.0	13.1	6.04	113	1.56	13.04	14.03	0.55	2625
R+8	29.6	32.8	0.43	0.30	16.7	1.27	10.1	16.2	6.59	131	1.54	16.27	17.46	0.61	2867
R+10	36.7	34.6	0.48	0.33	18.5	1.37	10.2	21.2	7.11	148	1.51	21.50	23.05	0.52	3451
R+10	35.5	32.3	0.48	0.33	17.9	1.34	10.2	19.1	6.94	142	1.52	19.35	20.75	0.51	3370
F+2	3.7	5.6	0.25	0.17	3.6	0.3785	8.7	0.3	1.96	18	0.00	0.45	0.00	0.53	496
F+2	6.4	4.1	0.25	0.17	6.3	0.58	9.3	0.4	2.99	37	0.00	0.52	0.52	0.81	756
F+4	15.0	17.3	0.33	0.23	11.1	0.93	9.7	4.3	4.81	78	0.00	4.99	5.13	0.75	1606
F+4	14.5	11.7	0.33	0.23	10.7	0.90	9.7	2.8	4.68	75	0.00	3.26	3.33	0.73	1562
F+6	19.3	22.4	0.37	0.25	12.6	1.03	9.8	7.2	5.35	93	0.00	8.15	8.48	0.66	2001
F+6	19.4	19.4	0.37	0.25	12.7	1.04	9.8	6.3	5.38	94	0.00	7.10	7.35	0.67	2012
F+6	19.3	22.4	0.37	0.25	12.6	1.15	9.4	7.2	5.96	105	0.00	8.45	8.76	0.74	2230
F+6	19.4	19.4	0.37	0.25	12.7	1.15	9.5	6.3	5.95	106	0.00	7.29	7.51	0.74	2224
F+8	27.4	20.1	0.41	0.28	16.2	1.28	10.9	9.2	6.62	143	0.00	9.35	9.67	0.67	2746
F+8	27.7	18.7	0.41	0.28	16.4	1.28	11.0	8.6	6.66	144	0.00	8.74	9.01	0.67	2760
F+10	36.5	33.0	0.49	0.34	18.1	1.36	11.4	20.1	7.07	164	0.00	19.59	20.90	0.50	3501
F+10	36.0	26.7	0.49	0.34	17.8	1.35	11.3	16.0	7.00	160	0.00	15.70	16.54	0.50	3470

RILL DATA ANALYSIS   SOIL: HERSH   DATE: MAY 21, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 109.93   Kinematic Viscosity = 1.308 x 10^{-6} m^2/s
Velocity Factor = 0.551 D_i = 73.29 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 6.63 %														
R+0	2.8	27.2	0.26	0.14	3.3	0.17	15.0	1.3	1.10	19	2.52	0.00	0.00	0.43	186
R+2	10.3	80.6	0.42	0.23	7.5	0.47	15.7	13.9	3.05	92	2.36	7.47	9.21	0.46	832
R+2	11.0	78.0	0.42	0.23	8.0	0.50	15.7	14.3	3.24	101	2.36	7.79	9.65	0.49	885
R+4	18.6	82.1	0.48	0.26	11.7	0.64	17.9	25.4	4.15	166	1.92	13.88	16.09	0.48	1294
R+4	18.1	153.2	0.48	0.26	11.4	0.62	17.9	46.3	4.02	158	1.92	26.86	31.60	0.46	1254
R+6	25.6	155.9	0.54	0.30	14.3	0.70	20.0	66.4	4.54	213	1.59	35.32	42.06	0.41	1592
R+6	26.5	134.8	0.54	0.30	14.9	0.72	20.0	59.6	4.67	222	1.59	31.51	36.78	0.42	1638
R+8	36.9	160.4	0.60	0.33	18.6	0.88	20.7	98.8	5.71	311	1.49	51.50	61.67	0.42	2224
R+8	35.8	144.2	0.60	0.33	18.1	0.86	20.7	86.1	5.58	300	1.49	44.70	52.62	0.41	2174
R+10	49.6	139.2	0.63	0.35	23.8	1.02	22.9	115.2	6.62	428	1.24	54.73	63.80	0.44	2707
R+10	35.5	150.9	0.63	0.35	17.0	0.75	22.9	89.2	4.87	270	1.24	42.10	50.76	0.32	1990
F+2	5.8	110.7	0.33	0.18	5.3	0.47	10.9	10.7	3.08	65	0.00	10.93	11.94	0.75	660
F+2	6.2	62.0	0.33	0.18	5.7	0.50	11.0	6.4	3.25	71	0.00	6.46	6.78	0.79	696
F+4	13.6	134.2	0.45	0.25	9.2	0.64	8.2	30.5	4.18	78	0.00	41.07	52.16	0.55	1223
F+4	13.9	112.6	0.45	0.25	9.4	0.66	8.3	26.1	4.25	80	0.00	35.06	42.47	0.55	1243
F+6	23.6	102.4	0.45	0.25	15.8	0.76	12.2	40.2	4.93	147	0.00	36.56	42.70	0.64	1441
F+6	24.4	90.6	0.45	0.25	16.4	0.78	12.3	36.9	5.08	155	0.00	33.30	38.04	0.66	1484
F+6	23.6	102.4	0.45	0.25	15.8	1.10	10.7	40.2	7.11	223	0.00	41.79	46.09	0.93	2078
F+6	24.4	90.6	0.45	0.25	16.4	1.12	10.8	36.9	7.30	233	0.00	38.04	41.40	0.95	2133
F+8	28.0	124.5	0.52	0.29	16.3	1.12	10.7	58.0	7.25	231	0.00	59.96	69.05	0.71	2449
F+8	30.3	115.1	0.52	0.29	17.6	1.19	10.9	58.1	7.69	256	0.00	59.15	67.09	0.75	2597
F+10	39.7	116.8	0.55	0.30	21.8	1.38	11.4	77.2	8.97	337	0.00	75.32	85.56	0.78	3204
F+10	40.4	129.5	0.55	0.30	22.2	1.40	11.4	87.3	9.10	345	0.00	84.75	97.71	0.79	3248
Rill 2	slope = 6.64 %														
R+0	2.9	40.6	0.23	0.16	3.1	0.15	15.7	2.0	0.97	17	2.36	0.00	0.00	0.31	181
R+2	11.7	104.3	0.47	0.26	7.6	0.44	16.4	20.4	2.86	87	2.20	11.60	14.20	0.34	871
R+2	12.0	81.4	0.47	0.26	7.7	0.45	16.4	16.3	2.92	90	2.20	8.79	11.03	0.35	891
R+4	21.3	127.4	0.59	0.33	10.9	0.58	18.6	45.2	3.77	149	1.80	25.22	30.33	0.29	1442
R+4	21.2	116.4	0.59	0.33	10.9	0.58	18.6	41.2	3.77	149	1.80	22.83	27.20	0.29	1442
R+6	26.7	128.4	0.50	0.28	16.1	0.82	19.3	57.1	5.33	261	1.69	31.21	35.91	0.56	1727
R+6	24.3	202.6	0.50	0.28	14.7	0.73	19.3	82.0	4.74	219	1.69	45.56	56.67	0.50	1538
R+8	31.4	201.3	0.60	0.33	15.8	0.74	20.7	105.3	4.81	240	1.49	55.01	71.45	0.35	1870
R+8	36.0	136.1	0.60	0.33	18.1	0.52	20.7	81.7	3.38	141	1.49	42.32	60.67	0.25	1314
R+10	44.5	119.7	0.65	0.36	20.7	0.85	23.6	88.8	5.52	336	1.16	40.70	47.50	0.35	2327
R+10	49.0	158.0	0.65	0.36	22.8	0.94	23.6	129.2	6.12	393	1.16	59.73	72.29	0.38	2580

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Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 6.64 %														
F+2	6.6	49.6	0.36	0.20	5.6	0.40	13.9	5.5	2.60	64	0.00	4.38	4.58	0.53	607
F+2	6.5	52.3	0.36	0.20	5.5	0.40	13.8	5.7	2.60	64	0.00	4.58	4.80	0.53	607
F+4	15.8	72.4	0.46	0.25	10.4	0.59	16.7	19.1	3.86	140	0.00	12.71	13.67	0.48	1153
F+4	15.4	56.7	0.46	0.25	10.1	0.58	16.5	14.5	3.80	134	0.00	9.78	10.35	0.47	1132
F+6	22.4	142.9	0.48	0.26	14.1	0.77	14.3	53.5	5.01	177	0.00	41.45	49.36	0.57	1560
F+6	21.9	129.9	0.48	0.26	13.8	0.75	14.3	47.3	4.90	170	0.00	36.73	43.02	0.56	1524
F+6	22.4	142.9	0.48	0.26	14.1	0.86	12.3	53.5	5.56	177	0.00	48.35	57.56	0.64	1731
F+6	21.9	129.9	0.48	0.26	13.8	0.84	12.2	47.3	5.45	171	0.00	43.05	50.41	0.63	1697
F+8	32.1	81.0	0.49	0.27	19.8	0.88	17.8	43.3	5.70	267	0.00	26.98	29.44	0.63	1811
F+8	31.2	88.3	0.49	0.27	19.3	0.86	17.7	46.0	5.58	257	0.00	28.81	31.74	0.61	1774
F+10	42.3	95.1	0.53	0.29	24.1	0.91	21.2	67.0	5.94	338	0.00	35.04	39.05	0.56	2041
F+10	41.1	98.0	0.53	0.29	23.4	0.89	21.3	67.1	5.77	324	0.00	35.03	39.24	0.54	1982
Rill 3	slope = 6.57 %														
R+0	2.4	34.2	0.21	0.14	2.8	0.16	14.3	1.4	1.03	16	2.71	0.00	0.00	0.40	176
R+2	11.0	66.6	0.38	0.21	8.8	0.55	15.7	12.3	3.54	115	2.36	6.32	8.08	0.65	880
R+2	11.3	58.5	0.38	0.21	9.0	0.56	15.7	11.0	3.60	118	2.36	5.44	7.25	0.66	896
R+4	21.0	101.0	0.49	0.27	13.0	0.74	17.1	35.4	4.76	196	2.06	20.89	23.75	0.52	1527
R+4	20.4	95.0	0.49	0.27	12.6	0.72	17.1	32.2	4.63	188	2.06	18.84	21.45	0.51	1486
R+6	25.0	176.6	0.54	0.30	14.0	0.76	17.9	73.5	4.89	212	1.92	43.80	52.66	0.44	1729
R+6	26.8	125.6	0.54	0.30	15.0	0.81	17.9	56.1	5.21	233	1.92	33.00	37.88	0.47	1843
R+8	33.4	115.8	0.57	0.31	17.7	0.78	20.7	64.5	5.02	256	1.49	33.09	38.12	0.41	1873
R+8	33.1	133.0	0.57	0.31	17.6	0.77	20.7	73.4	4.95	251	1.49	37.86	44.42	0.40	1849
R+10	45.0	178.1	0.47	0.26	29.0	1.09	24.3	133.7	7.01	495	1.09	60.06	69.88	0.84	2158
R+10	53.8	179.7	0.47	0.26	34.6	1.28	24.3	161.3	8.23	630	1.09	72.67	83.87	0.98	2534
F+2	7.0	61.5	0.32	0.18	6.6	0.66	8.3	7.1	4.26	80	0.00	9.53	9.98	1.10	893
F+2	7.2	52.1	0.32	0.18	6.8	0.68	8.3	6.2	4.36	84	0.00	8.28	8.60	1.12	914
F+4	14.8	119.5	0.40	0.22	11.2	0.77	13.0	29.5	4.96	158	0.00	25.30	28.01	0.82	1301
F+4	16.4	112.3	0.40	0.22	12.4	0.80	13.9	30.7	5.13	178	0.00	24.52	26.92	0.85	1344
F+6	21.3	89.1	0.41	0.23	15.7	0.64	21.0	31.6	4.12	193	0.00	16.74	18.28	0.65	1107
F+6	23.0	93.0	0.41	0.23	16.9	0.69	21.1	35.6	4.42	215	0.00	18.80	20.55	0.70	1188
F+6	21.3	89.1	0.41	0.23	15.7	0.77	18.1	31.6	4.98	221	0.00	19.40	20.93	0.78	1337
F+6	23.0	93.0	0.41	0.23	16.9	0.87	18.1	35.6	5.62	265	0.00	21.86	23.47	0.88	1510
F+8	29.6	97.2	0.48	0.26	18.6	0.73	24.0	47.9	4.69	268	0.00	22.20	24.45	0.54	1475
F+8	31.7	94.4	0.48	0.26	20.0	0.53	34.1	49.9	3.41	236	0.00	16.27	18.27	0.39	1073
F+10	40.4	105.3	0.49	0.27	24.9	0.66	34.0	70.9	4.24	327	0.00	23.15	26.10	0.47	1361
F+10	40.0	147.4	0.49	0.27	24.7	0.65	34.0	98.3	4.20	322	0.00	32.10	38.29	0.46	1349

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 6.88 %														
R+0	2.9	20.6	0.20	0.14	3.5	0.21	14.3	1.0	1.41	26	2.71	0.00	0.00	0.60	221
R+2	10.8	54.6	0.39	0.21	8.4	0.54	15.7	9.9	3.64	120	2.36	4.62	6.23	0.63	887
R+2	11.1	51.5	0.39	0.21	8.6	0.55	15.7	9.5	3.70	123	2.36	4.37	6.03	0.64	904
R+4	20.5	93.8	0.47	0.26	13.2	0.66	19.3	32.1	4.44	199	1.69	16.78	18.61	0.53	1307
R+4	19.3	125.8	0.47	0.26	12.4	0.63	19.3	40.5	4.24	185	1.69	21.65	24.08	0.51	1247
R+6	25.1	106.1	0.49	0.27	15.5	0.76	20.0	44.3	5.12	254	1.59	23.04	25.51	0.56	1569
R+6	25.9	145.9	0.49	0.27	16.0	0.79	20.0	62.9	5.32	270	1.59	33.38	37.60	0.59	1631
R+8	34.1	143.5	0.50	0.28	20.6	0.85	23.6	81.5	5.72	355	1.16	37.24	42.02	0.60	1790
R+8	33.2	136.6	0.50	0.28	20.1	0.83	23.6	75.7	5.59	342	1.16	34.50	38.76	0.59	1748
R+10	46.5	108.5	0.57	0.31	24.7	1.00	25.0	84.2	6.73	480	1.03	36.39	40.11	0.55	2401
R+10	46.0	115.0	0.57	0.31	24.4	0.99	25.0	88.3	6.67	473	1.03	38.20	42.31	0.54	2377
F+2	6.3	98.7	0.34	0.19	5.6	0.77	5.6	10.3	5.19	73	0.00	20.56	22.18	1.19	1104
F+2	6.5	66.0	0.34	0.19	5.7	0.79	5.6	7.1	5.29	75	0.00	14.07	14.78	1.21	1125
F+4	14.0	57.8	0.39	0.21	10.8	1.18	6.4	13.5	7.94	158	0.00	23.32	24.38	1.38	1938
F+4	15.0	63.8	0.39	0.21	11.7	1.23	6.5	16.0	8.29	171	0.00	27.17	28.52	1.44	2022
F+6	22.2	107.9	0.44	0.24	15.3	1.11	9.4	39.9	7.45	210	0.00	47.31	52.49	1.02	2051
F+6	22.4	103.8	0.44	0.24	15.4	1.11	9.4	38.8	7.50	212	0.00	45.91	50.70	1.02	2066
F+6	22.2	107.9	0.44	0.24	15.3	0.88	15.5	39.9	5.91	245	0.00	28.65	31.27	0.81	1628
F+6	22.4	103.8	0.44	0.24	15.4	0.88	15.5	38.8	5.95	248	0.00	27.75	30.18	0.81	1639
F+8	30.5	100.5	0.45	0.25	20.5	1.03	17.8	51.1	6.92	356	0.00	31.97	34.51	0.90	1950
F+8	32.7	81.4	0.45	0.25	22.0	1.09	18.0	44.4	7.32	391	0.00	27.49	29.18	0.96	2062
F+10	38.0	106.6	0.48	0.26	23.9	1.16	18.2	67.5	7.83	439	0.00	41.23	44.77	0.90	2353
F+10	36.0	114.1	0.48	0.26	22.7	1.12	18.0	68.6	7.51	408	0.00	42.22	46.22	0.86	2256
Rill 5	slope = 6.32 %														
R+0	3.1	22.0	0.18	0.12	4.2	0.18	14.3	1.1	1.11	18	2.71	0.00	0.00	0.58	170
R+2	11.0	103.1	0.39	0.21	8.5	0.45	15.7	18.9	2.78	80	2.36	11.04	13.10	0.48	739
R+2	11.2	81.2	0.39	0.21	8.7	0.46	15.7	15.2	2.82	82	2.36	8.41	10.29	0.49	749
R+4	19.0	122.5	0.47	0.26	12.2	0.62	17.9	38.9	3.83	147	1.92	22.25	25.88	0.46	1226
R+4	20.5	90.2	0.47	0.26	13.2	0.66	17.9	30.8	4.09	163	1.92	17.26	19.82	0.49	1310
R+6	25.8	108.5	0.45	0.25	17.4	0.84	20.7	46.7	5.19	269	1.49	23.57	26.44	0.68	1592
R+6	27.6	120.9	0.45	0.25	18.5	0.89	20.7	55.5	5.48	292	1.49	28.31	31.82	0.72	1680
R+8	32.2	187.5	0.59	0.33	16.5	0.72	22.1	100.6	4.45	229	1.32	49.16	63.08	0.34	1789
R+8	33.8	147.1	0.59	0.33	17.4	0.76	22.1	83.0	4.70	248	1.32	40.32	48.46	0.36	1889
R+10	46.5	189.5	0.49	0.27	28.7	1.20	25.0	147.0	7.42	556	1.03	64.32	74.46	0.82	2477
R+10	47.9	136.4	0.49	0.27	29.6	1.23	25.0	108.9	7.61	577	1.03	47.37	52.70	0.84	2539

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 6.32 %														
F+2	6.1	36.5	0.30	0.17	6.1	0.45	12.7	3.7	2.80	65	0.00	3.23	0.00	0.82	572
F+2	6.3	35.1	0.30	0.17	6.4	0.47	12.7	3.7	2.90	69	0.00	3.22	0.00	0.85	592
F+4	13.4	66.5	0.38	0.21	10.7	0.74	13.2	14.9	4.60	143	0.00	12.60	13.30	0.84	1191
F+4	14.2	66.0	0.38	0.21	11.3	0.78	13.2	15.7	4.84	155	0.00	13.17	13.89	0.88	1252
F+6	22.0	73.2	0.46	0.25	14.5	0.87	15.2	26.9	5.36	208	0.00	19.63	21.02	0.67	1680
F+6	22.4	97.8	0.46	0.25	14.7	0.88	15.3	36.5	5.43	212	0.00	26.58	29.17	0.68	1701
F+6	22.0	73.2	0.46	0.25	14.5	0.91	14.1	26.9	5.65	208	0.00	21.17	22.67	0.71	1771
F+6	22.4	97.8	0.46	0.25	14.7	0.92	14.2	36.5	5.72	213	0.00	28.64	31.42	0.71	1792
F+8	30.4	112.8	0.48	0.26	19.2	1.02	16.8	57.2	6.29	292	0.00	37.70	41.96	0.72	2057
F+8	29.1	109.7	0.48	0.26	18.3	1.06	15.4	53.2	6.53	283	0.00	38.32	42.45	0.75	2136
F+10	40.9	96.0	0.54	0.30	22.9	1.17	17.4	65.5	7.23	373	0.00	41.73	45.89	0.66	2660
F+10	40.8	127.6	0.54	0.30	22.9	1.17	17.4	86.8	7.22	372	0.00	55.38	63.08	0.65	2656
Rill 6	slope = 6.64 %														
R+0	3.4	42.8	0.18	0.12	4.6	0.25	15.7	2.4	1.62	36	2.36	0.00	0.00	0.85	236
R+2	11.8	102.5	0.37	0.20	9.6	0.55	17.1	20.1	3.57	127	2.06	10.96	12.11	0.69	857
R+2	12.1	89.7	0.37	0.20	9.9	0.56	17.1	18.1	3.64	131	2.06	9.68	10.88	0.70	873
R+4	20.6	127.5	0.43	0.24	14.5	0.77	18.6	43.8	5.00	228	1.80	24.40	26.86	0.71	1395
R+4	21.4	111.7	0.43	0.24	15.1	0.80	18.6	39.9	5.20	242	1.80	22.04	24.19	0.74	1449
R+6	26.4	133.0	0.43	0.24	18.6	0.85	21.4	58.5	5.52	306	1.40	28.95	31.91	0.79	1540
R+6	28.3	107.6	0.43	0.24	19.9	0.90	21.4	50.7	5.85	333	1.40	24.90	27.18	0.84	1630
R+8	34.6	140.7	0.42	0.23	24.9	1.01	28.6	81.2	6.56	528	0.75	30.82	33.51	0.98	1787
R+8	35.8	100.3	0.42	0.23	25.8	1.04	28.6	59.9	6.76	552	0.75	22.55	24.15	1.01	1840
R+10	48.5	146.2	0.58	0.32	25.3	1.02	28.6	118.2	6.63	536	0.75	45.24	50.78	0.52	2492
R+10	54.3	116.6	0.58	0.32	28.3	1.13	28.6	105.7	7.34	625	0.75	40.35	44.15	0.58	2761
F+2	6.6	66.3	0.34	0.19	5.9	0.38	14.4	7.3	2.48	62	0.00	5.63	5.99	0.57	548
F+2	6.7	59.8	0.34	0.19	6.0	0.39	14.5	6.7	2.52	64	0.00	5.13	5.42	0.58	555
F+4	15.0	89.3	0.43	0.24	10.6	0.44	22.2	22.4	2.86	118	0.00	11.18	12.40	0.41	796
F+4	15.8	93.5	0.43	0.24	11.1	0.46	22.2	24.6	3.00	127	0.00	12.30	13.67	0.43	835
F+6	24.1	136.1	0.46	0.25	15.8	0.65	22.3	54.6	4.19	211	0.00	27.19	31.48	0.52	1250
F+6	22.7	121.1	0.46	0.25	15.0	0.61	22.3	45.9	3.97	194	0.00	22.86	26.08	0.50	1185
F+8	30.4	114.8	0.50	0.28	18.4	0.71	23.7	58.1	4.61	257	0.00	27.28	30.93	0.49	1493
F+8	31.3	103.6	0.50	0.28	18.9	0.73	23.7	54.1	4.74	269	0.00	25.41	28.37	0.50	1538
F+10	41.9	109.9	0.46	0.25	27.6	1.03	23.7	76.8	6.72	454	0.00	36.01	39.46	0.84	2004
F+10	43.1	92.6	0.46	0.25	28.4	1.06	23.7	66.6	6.90	472	0.00	31.21	33.65	0.86	2057

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 87.66 Kinematic Viscosity = 1.435 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 62.78 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 5.18 %														
R+2	10.4	98.8	0.42	0.29	6.0	0.40	14.4	17.2	2.03	36	2.30	10.99	12.06	0.20	804
R+2	10.8	81.1	0.42	0.29	6.3	0.42	14.4	14.6	2.13	39	2.30	9.01	9.80	0.21	845
R+4	17.6	50.2	0.42	0.29	10.1	0.50	20.0	14.7	2.53	71	1.36	6.80	7.49	0.24	1005
R+4	19.2	46.1	0.42	0.29	11.1	0.54	20.0	14.7	2.74	79	1.36	6.82	7.46	0.26	1086
R+6	22.7	37.7	0.44	0.30	12.5	0.58	21.3	14.3	2.94	94	1.22	6.25	6.85	0.26	1222
R+6	25.3	35.2	0.44	0.30	13.9	0.64	21.3	14.8	3.24	109	1.22	6.53	7.09	0.28	1348
R+8	31.1	32.2	0.45	0.31	16.8	0.70	23.1	16.7	3.55	136	1.03	6.99	7.50	0.30	1508
R+8	32.4	31.0	0.45	0.31	17.5	0.73	23.1	16.7	3.70	144	1.03	7.01	7.50	0.31	1573
R+10	39.8	31.5	0.45	0.31	21.5	0.89	23.8	20.9	4.51	200	0.98	8.80	9.23	0.38	1917
R+10	40.0	30.4	0.45	0.31	21.6	0.89	23.8	20.2	4.51	200	0.98	8.49	8.91	0.38	1917
F+2	5.6	3.6	0.20	0.14	6.8	0.87	6.1	0.3	4.40	49	0.00	0.61	0.00	1.87	831
F+2	6.4	3.5	0.20	0.14	7.7	0.95	6.3	0.4	4.80	58	0.00	0.65	0.65	2.04	907
F+4	12.9	10.2	0.29	0.20	10.8	1.16	7.0	2.2	5.86	87	0.00	3.44	3.49	1.18	1605
F+4	14.2	12.3	0.29	0.20	11.9	1.22	7.3	2.9	6.18	99	0.00	4.43	4.49	1.25	1692
F+6	17.1	15.1	0.33	0.23	12.6	1.14	9.2	4.3	5.78	112	0.00	5.20	5.31	0.90	1802
F+6	17.3	17.0	0.33	0.23	12.7	1.14	9.2	4.9	5.80	113	0.00	5.89	6.02	0.90	1807
F+6	17.1	15.1	0.33	0.23	12.6	1.19	9.0	4.3	6.02	117	0.00	5.30	5.40	0.94	1877
F+6	17.3	17.0	0.33	0.23	12.7	1.19	9.1	4.9	6.05	118	0.00	6.01	6.14	0.94	1886
F+8	26.9	23.2	0.38	0.26	17.2	1.30	11.1	10.4	6.61	166	0.00	10.34	10.68	0.78	2373
F+8	27.4	20.9	0.38	0.26	17.5	1.32	11.2	9.5	6.67	170	0.00	9.41	9.68	0.78	2392
F+10	35.5	25.5	0.44	0.30	19.5	1.34	12.4	15.1	6.77	191	0.00	13.57	14.14	0.59	2812
F+10	36.6	22.6	0.44	0.30	20.2	1.42	12.4	13.7	7.19	210	0.00	12.28	12.70	0.63	2987
Rill 2	slope = 5.11 %														
R+2	10.0	89.9	0.35	0.24	6.9	0.46	14.4	15.0	2.30	44	2.30	9.27	9.27	0.32	771
R+2	10.7	74.8	0.35	0.24	7.4	0.49	14.4	13.3	2.45	48	2.30	7.99	7.99	0.34	821
R+4	18.6	58.9	0.37	0.25	12.2	0.64	18.1	18.3	3.20	91	1.61	9.61	9.61	0.40	1134
R+4	18.5	42.5	0.37	0.25	12.1	0.63	18.1	13.1	3.15	89	1.61	6.41	6.41	0.39	1116
R+6	25.6	38.6	0.41	0.28	15.2	0.69	21.9	16.5	3.45	123	1.15	7.22	7.22	0.35	1354
R+6	26.7	33.7	0.41	0.28	15.8	0.71	21.9	15.0	3.55	128	1.15	6.46	6.46	0.36	1394
R+8	31.6	31.7	0.43	0.30	17.8	0.75	23.1	16.7	3.75	147	1.03	6.99	6.99	0.34	1544
R+8	30.9	27.9	0.43	0.30	17.5	0.75	23.1	14.4	3.75	147	1.03	5.88	5.88	0.34	1544
R+10	41.1	32.4	0.49	0.34	20.3	0.84	23.8	22.1	4.20	179	0.98	9.38	9.38	0.30	1971
R+10	39.7	32.8	0.49	0.34	19.6	0.82	23.8	21.7	4.10	173	0.98	9.17	9.17	0.29	1924

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Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 5.11 %														
F+2	6.4	4.6	0.20	0.14	7.7	0.63	11.4	0.5	3.14	56	0.00	0.47	0.47	1.33	601
F+2	5.6	4.7	0.20	0.14	6.8	0.56	11.2	0.4	2.82	47	0.00	0.43	0.43	1.20	540
F+4	14.4	11.5	0.29	0.20	12.0	0.77	14.6	2.8	3.83	96	0.00	2.10	2.13	0.77	1063
F+4	15.0	12.7	0.29	0.20	12.5	0.78	14.8	3.2	3.92	101	0.00	2.37	2.41	0.79	1088
F+6	19.3	13.8	0.32	0.22	14.7	0.84	16.3	4.4	4.20	123	0.00	3.03	3.09	0.70	1286
F+6	18.5	13.0	0.32	0.22	14.0	0.83	15.8	4.0	4.14	116	0.00	2.82	2.87	0.69	1267
F+6	19.3	13.8	0.32	0.22	14.7	1.20	6.8	4.4	5.99	88	0.00	7.24	7.43	0.99	1834
F+6	18.5	13.0	0.32	0.22	14.0	1.17	6.7	4.0	5.83	83	0.00	6.61	6.78	0.97	1785
F+8	27.6	22.0	0.38	0.26	17.6	1.31	7.1	10.1	6.56	105	0.00	15.72	16.53	0.77	2387
F+8	28.9	20.7	0.38	0.26	18.5	1.37	7.3	10.0	6.88	116	0.00	15.11	15.79	0.81	2501
F+10	37.6	20.9	0.45	0.31	20.2	1.45	7.5	13.1	7.25	129	0.00	19.27	20.32	0.61	3125
F+10	38.1	19.4	0.45	0.31	20.5	1.46	7.6	12.3	7.31	131	0.00	18.00	18.89	0.61	3149
Rill 3	slope = 5.24 %														
R+2	10.9	58.5	0.34	0.23	7.8	0.57	13.1	10.7	2.92	58	2.62	5.74	6.83	0.43	928
R+2	10.8	41.4	0.34	0.23	7.7	0.56	13.1	7.4	2.87	56	2.62	3.35	4.66	0.42	912
R+4	18.7	52.0	0.43	0.30	10.6	0.53	19.4	16.2	2.72	76	1.44	10.97	10.97	0.25	1091
R+4	19.0	38.6	0.43	0.30	10.7	0.53	19.4	12.2	2.72	76	1.44	7.60	7.60	0.25	1091
R+6	25.0	34.8	0.41	0.28	14.8	0.69	21.3	14.5	3.54	124	1.22	8.21	8.21	0.36	1354
R+6	24.4	29.5	0.41	0.28	14.5	0.67	21.3	12.0	3.44	119	1.22	6.48	6.48	0.35	1315
R+8	30.6	29.8	0.41	0.28	18.1	0.81	21.9	15.2	4.15	162	1.15	14.09	14.09	0.42	1590
R+8	31.9	29.1	0.41	0.28	18.9	0.85	21.9	15.5	4.36	175	1.15	14.24	14.24	0.44	1668
R+10	39.3	30.5	0.45	0.31	21.2	0.93	23.8	20.0	4.77	217	0.98	18.96	18.96	0.40	2004
R+10	40.3	29.7	0.45	0.31	21.7	0.95	23.8	19.9	4.87	224	0.98	18.74	18.74	0.41	2047
F+2	6.5	5.5	0.21	0.14	7.6	0.90	7.2	0.6	4.62	63	0.00	0.92	0.00	1.78	905
F+2	6.4	3.8	0.21	0.14	7.4	0.89	7.2	0.4	4.56	62	0.00	0.62	0.00	1.76	893
F+4	15.0	9.6	0.28	0.19	13.0	1.28	8.4	2.4	6.54	123	0.00	3.20	3.23	1.42	1710
F+4	15.0	9.6	0.28	0.19	13.0	1.28	8.4	2.4	6.55	123	0.00	3.20	3.24	1.42	1713
F+6	18.7	18.0	0.30	0.21	15.1	1.40	8.8	5.6	7.17	147	0.00	7.12	7.26	1.35	2007
F+6	17.5	18.5	0.30	0.21	14.2	1.34	8.6	5.4	6.89	136	0.00	7.00	7.14	1.30	1930
F+6	18.7	18.0	0.30	0.21	15.1	1.45	8.0	5.6	7.41	142	0.00	7.78	7.94	1.40	2077
F+6	17.5	18.5	0.30	0.21	14.2	1.39	7.8	5.4	7.15	131	0.00	7.65	7.81	1.35	2002
F+8	27.4	20.6	0.34	0.23	19.5	1.66	8.7	9.4	8.52	190	0.00	11.99	12.30	1.25	2705
F+8	27.3	18.2	0.34	0.23	19.5	1.66	8.7	8.3	8.51	189	0.00	10.62	10.86	1.25	2702
F+10	36.6	23.5	0.37	0.25	24.0	1.86	9.2	14.3	9.54	238	0.00	17.32	17.87	1.18	3297
F+10	36.8	19.4	0.37	0.25	24.1	1.87	9.2	11.9	9.57	239	0.00	14.31	14.67	1.19	3305

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 5.12 %														
R+2	11.3	65.2	0.34	0.23	8.0	0.60	13.1	12.2	3.01	60	2.62	8.25	8.25	0.44	977
R+2	10.9	52.1	0.34	0.23	7.8	0.58	13.1	9.4	2.91	57	2.62	5.73	6.16	0.43	944
R+4	18.8	45.9	0.37	0.25	12.3	0.61	20.0	14.4	3.06	94	1.36	8.51	8.51	0.38	1081
R+4	19.2	48.3	0.37	0.25	12.6	0.62	20.0	15.4	3.11	96	1.36	9.28	9.28	0.39	1098
R+6	23.9	40.5	0.35	0.24	16.6	0.80	20.6	16.1	4.01	145	1.29	9.37	9.37	0.56	1340
R+6	24.2	33.5	0.35	0.24	16.7	0.80	20.6	13.5	4.01	145	1.29	7.47	7.47	0.56	1340
R+8	30.3	34.1	0.37	0.25	19.9	0.82	23.1	17.2	4.11	169	1.03	10.30	10.30	0.51	1453
R+8	31.2	32.2	0.37	0.25	20.5	0.86	23.1	16.8	4.31	181	1.03	9.90	9.90	0.53	1523
R+10	41.3	35.4	0.39	0.27	25.7	1.01	24.4	24.4	5.06	243	0.93	12.51	12.51	0.57	1886
R+10	40.3	30.0	0.39	0.27	25.0	0.99	24.4	20.1	4.96	236	0.93	10.24	10.24	0.55	1848
F+2	6.6	4.7	0.20	0.14	8.0	0.67	10.7	0.5	3.37	58	0.00	0.54	0.54	1.43	645
F+2	6.6	4.7	0.20	0.14	8.0	0.67	10.6	0.5	3.37	58	0.00	0.54	0.55	1.43	643
F+4	15.2	13.5	0.27	0.19	13.7	0.91	13.5	3.4	4.55	115	0.00	2.81	2.85	1.06	1173
F+4	14.9	10.1	0.27	0.19	13.4	0.90	13.3	2.5	4.52	112	0.00	2.10	2.13	1.05	1167
F+6	10.2	6.1	0.22	0.15	11.3	0.84	11.9	1.0	4.23	91	0.00	0.96	0.97	1.49	889
F+6	10.6	23.3	0.22	0.15	11.6	0.86	12.1	4.1	4.31	95	0.00	3.77	3.85	1.51	905
F+6	10.2	6.1	0.22	0.15	11.3	0.93	10.2	1.0	4.64	89	0.00	1.13	1.13	1.63	976
F+6	10.6	23.3	0.22	0.15	11.6	0.94	10.4	4.1	4.69	93	0.00	4.36	4.46	1.65	986
F+8	27.4	16.7	0.34	0.23	19.6	1.26	13.2	7.6	6.31	183	0.00	6.45	6.58	0.93	2049
F+8	28.2	16.6	0.34	0.23	20.1	1.27	13.5	7.8	6.37	190	0.00	6.46	6.60	0.94	2071
F+10	36.6	18.5	0.37	0.25	24.0	1.38	14.9	11.2	6.89	237	0.00	8.37	8.58	0.86	2437
F+10	36.9	18.4	0.37	0.25	24.2	1.38	15.0	11.3	6.91	239	0.00	8.37	8.58	0.86	2444
Rill 5	slope = 4.98 %														
R+2	9.9	44.5	0.30	0.21	8.0	0.58	13.8	7.4	2.83	57	2.45	4.32	4.32	0.53	833
R+2	10.4	39.2	0.30	0.21	8.4	0.60	13.8	6.8	2.92	60	2.45	3.70	3.77	0.55	862
R+4	17.1	39.2	0.41	0.28	10.1	0.55	18.1	11.1	2.68	70	1.61	7.74	7.74	0.27	1080
R+4	18.1	32.2	0.41	0.28	10.7	0.58	18.1	9.7	2.83	76	1.61	6.27	6.27	0.29	1138
R+6	24.7	31.8	0.36	0.25	16.6	0.80	20.6	13.1	3.90	139	1.29	8.59	8.59	0.51	1379
R+6	24.2	30.5	0.36	0.25	16.3	0.78	20.6	12.3	3.80	134	1.29	7.96	7.96	0.50	1344
R+8	31.3	25.6	0.33	0.23	23.0	0.99	22.5	13.4	4.82	209	1.09	7.04	7.04	0.75	1564
R+8	30.9	23.7	0.33	0.23	22.7	0.98	22.5	12.2	4.78	206	1.09	6.31	6.31	0.75	1548
R+10	37.9	31.1	0.41	0.28	22.4	0.90	24.4	19.7	4.39	196	0.93	11.37	11.37	0.44	1767
R+10	39.4	25.2	0.41	0.28	23.3	0.93	24.4	16.6	4.53	206	0.93	9.08	9.08	0.46	1825

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 4.98 %														
F+2	5.4	2.7	0.18	0.12	7.3	0.54	13.3	0.2	2.61	49	0.00	0.20	0.00	1.37	462
F+2	5.5	1.8	0.18	0.12	7.5	0.55	13.3	0.2	2.66	50	0.00	0.14	0.00	1.39	470
F+4	12.8	8.8	0.24	0.16	12.9	0.87	14.0	1.9	4.26	108	0.00	1.49	1.51	1.26	1004
F+4	14.1	7.1	0.24	0.16	14.3	0.84	13.9	1.7	4.07	100	0.00	1.33	1.34	1.20	959
F+6	18.0	11.1	0.30	0.21	14.6	0.96	14.3	3.3	4.69	127	0.00	2.60	2.63	0.89	1383
F+6	17.5	11.7	0.30	0.21	14.1	0.94	14.2	3.4	4.57	122	0.00	2.68	2.72	0.86	1348
F+6	18.0	11.1	0.30	0.21	14.6	1.29	6.9	3.3	6.29	95	0.00	5.37	5.46	1.19	1854
F+6	17.5	11.7	0.30	0.21	14.1	1.27	6.9	3.4	6.17	92	0.00	5.55	5.65	1.17	1819
F+8	27.3	16.6	0.35	0.24	18.9	1.50	7.3	7.6	7.32	127	0.00	11.47	11.82	1.02	2518
F+8	28.0	14.9	0.35	0.24	19.4	1.52	7.4	7.0	7.47	131	0.00	10.52	10.81	1.03	2555
F+10	35.7	23.0	0.38	0.26	22.8	1.67	7.7	13.7	8.12	156	0.00	19.79	20.71	0.96	3031
F+10	35.4	19.4	0.38	0.26	22.6	1.66	7.7	11.5	8.08	1[illegible]5	0.00	16.61	17.26	0.95	3018
Rill 6	slope = 4.87 %														
R+2	9.5	34.8	0.29	0.20	8.0	0.55	14.4	5.5	2.62	53	2.30	2.55	2.63	0.53	764
R+2	9.6	33.5	0.29	0.20	8.0	0.55	14.4	5.3	2.62	53	2.30	2.33	2.55	0.53	764
R+4	16.6	38.8	0.39	0.27	10.3	0.56	18.1	10.7	2.67	69	1.61	7.01	7.01	0.30	1046
R+4	17.5	30.5	0.39	0.27	10.9	0.59	18.1	8.9	2.81	75	1.61	5.12	5.12	0.31	1102
R+6	25.7	31.5	0.38	0.26	16.4	0.81	20.0	13.5	3.86	133	1.36	7.74	7.74	0.45	1474
R+6	25.1	28.0	0.38	0.26	16.0	0.79	20.0	11.7	3.77	128	1.36	6.49	6.49	0.44	1437
R+8	32.2	29.2	0.43	0.30	18.2	0.80	22.5	15.7	3.81	147	1.09	11.84	11.84	0.35	1647
R+8	32.1	26.5	0.43	0.30	18.1	0.80	22.5	14.2	3.81	147	1.09	10.43	10.43	0.35	1647
R+10	32.1	27.0	0.42	0.29	18.6	0.82	23.8	14.5	3.91	161	0.98	10.67	10.67	0.38	1649
R+10	36.5	25.0	0.42	0.29	21.1	0.92	23.8	15.2	4.38	191	0.98	11.19	11.19	0.42	1850
F+2	4.7	4.1	0.19	0.13	6.1	0.68	6.7	0.3	3.23	34	0.00	0.53	0.00	1.52	616
F+2	5.0	4.3	0.19	0.13	6.3	0.65	8.6	0.4	3.09	41	0.00	0.46	0.00	1.46	590
F+4	13.9	7.8	0.26	0.18	12.9	0.95	10.7	1.8	4.53	90	0.00	1.88	1.90	1.14	1182
F+4	13.8	8.6	0.26	0.18	12.8	0.95	10.6	2.0	4.51	89	0.00	2.07	2.09	1.13	1178
F+6	19.3	12.9	0.30	0.21	15.6	1.07	11.5	4.1	5.09	115	0.00	4.01	4.09	0.96	1534
F+6	18.6	15.1	0.30	0.21	15.1	1.04	11.4	4.7	4.95	110	0.00	4.56	4.66	0.94	1493
F+6	19.3	12.9	0.30	0.21	15.6	1.10	10.9	4.1	5.25	115	0.00	4.22	4.29	0.99	1582
F+6	18.6	15.1	0.30	0.21	15.1	1.07	10.9	4.7	5.11	110	0.00	4.78	4.89	0.96	1539
F+8	28.7	20.0	0.39	0.27	17.9	1.22	11.1	9.6	5.82	137	0.00	9.59	9.94	0.65	2282
F+8	29.8	18.2	0.39	0.27	18.5	1.26	11.2	9.0	5.99	143	0.00	9.01	9.31	0.67	2346
F+10	37.0	21.3	0.39	0.27	23.0	1.47	11.5	13.1	7.02	188	0.00	12.68	13.14	0.78	2750
F+10	37.5	19.5	0.39	0.27	23.4	1.49	11.6	12.2	7.09	191	0.00	11.74	12.13	0.79	2778

RILL DATA ANALYSIS SOIL: AMARILLO DATE: MAY 28, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 107.44 Kinematic Viscosity = 0.93 x 10^{-6} m^2/s
Velocity Factor = 0.551 D_i = 68.52 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 3.76 %														
R+2	13.2	74.1	0.44	0.24	9.06	0.54	16.1	16.3	1.99	49	2.12	9.10	9.18	0.27	1408
R+2	10.8	77.6	0.44	0.24	7.40	0.45	16.1	13.9	1.66	37	2.12	7.47	0.00	0.23	1173
R+4	19.2	78.3	0.50	0.28	11.59	0.64	17.4	25.0	2.35	67	1.88	14.12	17.96	0.25	1896
R+4	19.6	82.1	0.50	0.28	11.89	0.66	17.4	26.9	2.43	71	1.88	15.33	19.71	0.26	1955
R+6	25.1	81.7	0.54	0.30	14.04	0.77	18.0	34.2	2.83	92	1.78	19.33	25.01	0.26	2464
R+6	25.1	86.2	0.54	0.30	14.08	0.77	18.0	36.1	2.83	92	1.78	20.54	26.85	0.26	2464
R+8	33.0	116.0	0.63	0.35	15.84	0.80	18.6	63.8	2.94	101	1.68	36.42	56.74	0.20	2986
R+8	32.8	100.7	0.63	0.35	15.74	0.80	18.6	55.0	2.94	101	1.68	31.19	45.03	0.20	2986
R+10	44.0	124.6	0.68	0.37	19.56	0.97	19.2	91.4	3.57	139	1.59	51.25	82.79	0.20	3908
R+10	38.1	112.8	0.68	0.37	16.94	0.85	19.2	71.6	3.13	114	1.59	39.83	62.09	0.18	3424
F+2	6.9	32.5	0.44	0.24	4.73	0.61	3.9	3.7	2.23	14	0.00	10.47	12.14	0.30	1583
F+2	6.5	32.7	0.44	0.24	4.50	0.59	3.9	3.6	2.16	13	0.00	10.17	11.84	0.29	1532
F+4	15.6	58.1	0.52	0.29	9.08	0.92	4.5	15.1	3.37	30	0.00	37.24	51.83	0.33	2821
F+4	15.7	68.7	0.52	0.29	9.12	0.92	4.5	18.0	3.38	30	0.00	44.20	67.25	0.33	2828
F+6	22.3	66.1	0.60	0.33	11.24	1.03	4.7	24.5	3.80	37	0.00	58.04	94.40	0.28	3673
F+6	21.6	89.6	0.60	0.33	10.90	1.02	4.7	32.3	3.74	36	0.00	76.79	190.51	0.27	3611
F+6	22.3	66.1	0.60	0.33	11.24	0.75	9.9	24.5	2.74	48	0.00	27.43	38.24	0.20	2648
F+6	21.6	89.6	0.60	0.33	10.90	0.73	9.9	32.3	2.67	47	0.00	36.16	61.67	0.20	2581
F+8	28.0	82.8	0.60	0.33	14.11	0.90	10.1	38.6	3.31	66	0.00	42.30	63.83	0.24	3197
F+8	29.4	73.3	0.60	0.33	14.80	0.93	10.2	35.8	3.44	70	0.00	39.08	54.83	0.25	3322
F+10	43.6	91.4	0.62	0.34	21.28	1.24	10.6	66.5	4.57	111	0.00	69.53	105.84	0.31	4558
F+10	39.3	90.5	0.62	0.34	19.17	1.15	10.5	59.3	4.22	98	0.00	62.84	96.77	0.29	4210
Rill 2	slope = 3.6 %														
R+2	12.5	49.2	0.39	0.21	9.71	0.54	17.4	10.3	1.90	49	1.88	4.69	5.48	0.33	1248
R+2	10.5	50.4	0.39	0.21	8.16	0.46	17.4	8.8	1.62	38	1.88	3.77	0.00	0.28	1063
R+4	18.8	70.5	0.51	0.28	11.15	0.58	18.0	22.1	2.04	56	1.78	11.87	15.07	0.21	1753
R+4	18.6	80.1	0.51	0.28	11.04	0.58	18.0	24.8	2.04	56	1.78	13.57	17.50	0.21	1753
R+6	24.9	76.3	0.60	0.33	12.56	0.64	18.6	31.7	2.25	68	1.68	17.25	23.65	0.17	2275
R+6	25.2	65.9	0.60	0.33	12.71	0.65	18.6	27.7	2.29	69	1.68	14.85	19.74	0.17	2311
R+8	31.5	78.4	0.68	0.37	14.03	0.68	19.2	41.2	2.40	77	1.59	22.25	32.24	0.14	2740
R+8	32.1	68.9	0.68	0.37	14.27	0.69	19.2	36.9	2.43	78	1.59	19.72	27.33	0.14	2780
R+10	40.8	114.6	0.76	0.42	16.24	0.78	19.8	77.9	2.75	97	1.51	42.15	83.26	0.13	3512
R+10	40.4	99.2	0.76	0.42	16.06	0.77	19.8	66.8	2.71	95	1.51	35.90	61.43	0.12	3467

RILL DATA ANALYSIS SOIL: AMARILLO DATE: MAY 28, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 3.6 %														
F+2	6.2	24.4	0.46	0.25	4.11	0.53	6.7	2.5	1.87	18	0.00	4.19	4.50	0.23	1444
F+2	6.5	45.0	0.46	0.25	4.25	0.55	6.8	4.8	1.92	19	0.00	7.95	9.15	0.24	1486
F+4	14.8	31.1	0.53	0.29	8.46	0.92	7.4	7.7	3.25	47	0.00	11.48	12.54	0.31	2899
F+4	14.4	54.9	0.53	0.29	8.21	0.90	7.4	13.2	3.18	45	0.00	19.79	23.40	0.30	2839
F+6	21.4	41.8	0.62	0.34	10.45	1.07	7.8	14.9	3.76	61	0.00	21.37	24.52	0.26	3922
F+6	21.4	57.7	0.62	0.34	10.46	1.07	7.8	20.6	3.76	61	0.00	29.54	36.07	0.26	3924
F+6	21.4	41.8	0.62	0.34	10.45	0.79	11.5	14.9	2.80	58	0.00	14.45	16.72	0.19	2918
F+6	21.4	57.7	0.62	0.34	10.46	0.79	11.5	20.6	2.80	58	0.00	19.97	24.71	0.19	2919
F+8	27.0	71.3	0.67	0.37	12.20	0.89	11.9	32.1	3.14	71	0.00	29.96	39.86	0.18	3536
F+8	27.5	52.2	0.67	0.37	12.40	0.90	12.0	23.9	3.17	73	0.00	22.20	26.92	0.19	3577
F+10	41.5	71.6	0.72	0.40	17.43	0.78	12.8	49.5	2.76	63	0.00	42.96	84.19	0.14	3340
F+10	39.3	63.8	0.72	0.40	16.52	0.75	12.7	41.8	2.63	58	0.00	36.56	64.27	0.13	3190
Rill 3	slope = 3.73 %														
R+2	12.7	27.3	0.51	0.28	7.54	0.44	17.4	5.8	1.61	38	1.88	1.82	1.84	0.16	1330
R+2	10.9	25.1	0.51	0.28	6.46	0.36	17.4	4.6	1.31	28	1.88	1.03	1.16	0.13	1088
R+4	20.0	23.5	0.53	0.29	11.42	0.61	18.0	7.8	2.23	64	1.78	3.06	3.12	0.21	1915
R+4	20.3	19.3	0.53	0.29	11.60	0.61	18.0	6.5	2.23	64	1.78	2.26	2.59	0.21	1915
R+6	28.5	17.2	0.57	0.31	15.15	0.78	18.6	8.2	2.85	96	1.68	3.21	3.57	0.23	2634
R+6	27.7	20.6	0.57	0.31	14.73	0.76	18.6	9.5	2.77	92	1.68	4.00	4.13	0.23	2567
R+8	34.4	18.7	0.63	0.35	16.52	0.84	18.6	10.7	3.07	107	1.68	4.71	4.83	0.20	3135
R+8	35.3	17.2	0.63	0.35	16.96	0.86	18.6	10.1	3.14	111	1.68	4.37	4.60	0.21	3210
R+10	48.7	14.8	0.71	0.39	20.76	1.03	18.6	12.0	3.76	146	1.68	5.49	5.75	0.20	4333
R+10	44.9	15.3	0.71	0.39	19.13	0.96	18.6	11.5	3.50	131	1.68	5.17	5.39	0.18	4038
F+2	6.8	15.2	0.42	0.23	4.88	0.30	15.9	1.7	1.10	20	0.00	1.20	1.26	0.16	750
F+2	6.9	17.1	0.42	0.23	4.99	0.31	16.0	2.0	1.12	20	0.00	1.37	1.44	0.17	764
F+4	15.3	59.3	0.56	0.31	8.24	0.46	17.0	15.1	1.67	39	0.00	9.86	12.44	0.14	1515
F+4	14.7	49.9	0.56	0.31	7.94	0.44	17.0	12.2	1.61	37	0.00	8.01	9.70	0.14	1464
F+6	21.4	49.4	0.60	0.33	10.78	0.60	17.3	17.6	2.20	61	0.00	11.33	13.38	0.16	2142
F+6	21.7	31.9	0.60	0.33	10.93	0.61	17.3	11.5	2.23	62	0.00	7.42	8.21	0.16	2170
F+6	21.4	49.4	0.60	0.33	10.78	0.47	18.8	17.6	1.73	46	0.00	10.40	13.11	0.13	1683
F+6	21.7	31.9	0.60	0.33	10.93	0.48	18.8	11.5	1.75	47	0.00	6.81	7.81	0.13	1704
F+8	26.6	70.5	0.68	0.37	11.82	0.52	18.9	31.2	1.88	52	0.00	18.36	27.90	0.11	2078
F+8	28.5	41.6	0.68	0.37	12.66	0.55	18.9	19.7	2.01	58	0.00	11.59	14.17	0.11	2217
F+10	42.8	48.3	0.70	0.39	18.48	0.77	19.0	34.4	2.80	96	0.00	20.08	24.89	0.15	3176
F+10	40.6	45.9	0.70	0.39	17.53	0.73	19.0	31.1	2.66	89	0.00	18.16	22.34	0.14	3026

RILL DATA ANALYSIS SOIL: AMARILLO DATE: MAY 28, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 4	slope = 3.76 %														
R+2	11.8	165.6	0.45	0.25	7.92	0.48	16.1	32.5	1.77	41	2.12	20.29	35.11	0.23	1280
R+2	10.4	115.5	0.45	0.25	6.98	0.43	16.1	20.0	1.58	34	2.12	11.66	11.66	0.21	1146
R+4	18.8	85.1	0.55	0.30	10.34	0.59	17.4	26.7	2.17	60	1.88	15.18	20.99	0.19	1923
R+4	19.5	63.8	0.55	0.30	10.73	0.61	17.4	20.8	2.24	63	1.88	11.40	15.16	0.20	1988
R+6	23.4	121.0	0.58	0.32	12.20	0.65	18.0	47.2	2.39	71	1.78	27.36	44.27	0.19	2234
R+6	23.1	106.0	0.58	0.32	12.05	0.64	18.0	40.8	2.35	70	1.78	23.45	35.43	0.18	2199
R+8	31.9	137.2	0.65	0.36	14.83	0.81	18.0	72.8	2.98	99	1.78	43.24	76.73	0.19	3119
R+8	29.8	124.2	0.65	0.36	13.86	0.73	18.0	61.6	2.69	85	1.78	36.32	63.53	0.17	2811
R+10	40.8	106.5	0.78	0.43	15.83	0.82	18.6	72.5	3.02	105	1.68	41.62	70.29	0.13	3789
R+10	42.8	150.7	0.78	0.43	16.58	0.86	18.6	107.4	3.16	112	1.68	62.47	62.47	0.14	3974
F+2	6.7	57.5	0.40	0.22	5.03	0.71	5.3	6.4	2.61	24	0.00	13.39	15.57	0.43	1684
F+2	6.7	45.4	0.40	0.22	5.06	0.71	5.3	5.1	2.62	24	0.00	10.60	11.90	0.43	1690
F+4	15.0	50.5	0.58	0.32	7.80	0.70	7.6	12.6	2.57	34	0.00	18.38	23.02	0.20	2401
F+4	15.1	46.3	0.58	0.32	7.90	0.70	7.7	11.7	2.57	34	0.00	16.79	20.54	0.20	2401
F+6	19.3	83.2	0.57	0.31	10.26	0.77	9.4	26.8	2.85	49	0.00	31.55	45.79	0.23	2615
F+6	19.4	76.6	0.57	0.31	10.32	0.78	9.5	24.8	2.86	49	0.00	29.14	40.59	0.23	2623
F+6	19.3	83.2	0.57	0.31	10.26	0.69	14.2	26.8	2.54	62	0.00	21.04	27.60	0.21	2335
F+6	19.4	76.6	0.57	0.31	10.32	0.70	14.2	24.8	2.56	62	0.00	19.49	24.88	0.21	2347
F+8	25.6	71.7	0.58	0.32	13.34	0.81	15.7	30.6	2.97	86	0.00	21.70	26.81	0.23	2775
F+8	27.2	88.6	0.58	0.32	14.17	0.85	15.8	40.1	3.12	94	0.00	28.19	36.83	0.24	2912
F+10	39.4	84.3	0.62	0.34	19.24	1.08	16.7	55.4	3.96	142	0.00	36.86	46.76	0.27	3957
F+10	39.3	89.1	0.62	0.34	19.16	1.07	16.7	58.3	3.95	141	0.00	38.80	50.10	0.27	3943
Rill 5	slope = 3.42 %														
R+0	8.9	79.9	0.45	0.25	5.96	0.38	15.5	11.8	1.27	24	2.25	6.22	0.00	0.17	1013
R+2	10.1	73.0	0.45	0.25	6.80	0.43	15.5	12.3	1.44	29	2.25	6.58	0.00	0.19	1146
R+2	18.5	76.5	0.48	0.26	11.64	0.66	16.7	23.5	2.21	59	2.00	13.63	17.94	0.25	1877
R+4	18.1	56.2	0.48	0.26	11.41	0.65	16.7	17.0	2.18	58	2.00	9.26	12.02	0.25	1849
R+4	23.2	78.6	0.48	0.26	14.62	0.78	17.4	30.4	2.61	79	1.88	17.55	23.12	0.30	2218
R+6	23.8	92.5	0.48	0.26	14.99	0.80	17.4	36.7	2.68	82	1.88	21.59	29.33	0.31	2275
R+6	30.8	90.4	0.60	0.33	15.51	0.83	18.0	46.3	2.78	89	1.78	26.86	38.15	0.20	2951
R+8	32.8	105.3	0.60	0.33	16.53	0.88	18.0	57.6	2.95	98	1.78	33.79	50.91	0.22	3128
R+8	43.7	122.8	0.66	0.36	20.05	1.04	18.6	89.6	3.48	130	1.68	51.82	86.99	0.21	4067
R+10	39.3	114.3	0.66	0.36	18.01	0.91	18.6	74.9	3.05	106	1.68	43.05	73.15	0.18	3558

RILL DATA ANALYSIS SOIL: AMARILLO DATE: MAY 28, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 3.42 %														
F+2	5.7	51.0	0.36	0.20	4.76	0.79	4.2	4.8	2.65	19	0.00	12.77	14.68	0.54	1688
F+2	5.5	62.1	0.36	0.20	4.62	0.78	4.1	5.7	2.61	19	0.00	15.27	18.21	0.53	1661
F+4	13.4	35.0	0.48	0.26	8.47	0.59	6.7	7.9	1.97	20	0.00	13.03	16.58	0.23	1670
F+4	14.3	42.8	0.48	0.26	9.04	0.62	6.7	10.2	2.07	22	0.00	16.84	22.81	0.24	1760
F+6	22.1	51.4	0.58	0.32	11.52	0.75	6.9	18.9	2.51	30	0.00	30.23	48.08	0.20	2577
F+6	21.0	61.5	0.58	0.32	10.97	0.72	6.9	21.6	2.42	28	0.00	34.71	66.76	0.19	2480
F+6	22.1	51.4	0.58	0.32	11.52	0.66	14.0	18.9	2.21	49	0.00	15.00	18.90	0.17	2267
F+6	21.0	61.5	0.58	0.32	10.97	0.64	13.6	21.6	2.16	46	0.00	17.63	23.75	0.17	2215
F+8	27.5	79.0	0.66	0.36	12.61	0.65	16.7	36.2	2.18	58	0.00	24.13	37.93	0.13	2551
F+8	27.2	56.1	0.66	0.36	12.47	0.65	16.7	25.5	2.16	57	0.00	16.97	22.49	0.13	2525
F+10	41.9	69.0	0.65	0.36	19.52	0.90	17.4	48.2	3.03	98	0.00	30.79	42.31	0.19	3482
F+10	36.4	63.7	0.65	0.36	16.95	0.80	17.1	38.7	2.68	81	0.00	25.14	34.22	0.17	3088
Rill 6	slope = 3.26 %														
R+2	11.7	121.8	0.43	0.24	8.26	0.52	15.5	23.8	1.66	36	3.37	13.72	0.00	0.24	1325
R+2	11.4	66.8	0.43	0.24	8.03	0.51	15.5	12.7	1.63	35	3.37	5.74	0.00	0.23	1299
R+4	16.3	89.6	0.45	0.25	10.98	0.62	17.4	24.4	1.98	52	3.37	12.25	14.76	0.26	1653
R+4	18.3	80.3	0.45	0.25	12.27	0.68	17.4	24.4	2.17	60	3.37	12.26	16.26	0.28	1813
R+6	24.3	58.7	0.50	0.28	14.71	0.77	18.0	23.8	2.46	74	3.37	11.32	15.59	0.26	2281
R+6	24.1	103.5	0.50	0.28	14.60	0.76	18.0	41.7	2.42	73	3.37	22.37	32.32	0.26	2251
R+8	30.8	69.5	0.63	0.35	14.79	0.77	18.6	35.7	2.46	77	3.37	17.93	24.82	0.16	2874
R+8	30.6	74.1	0.63	0.35	14.70	0.77	18.6	37.8	2.46	77	3.37	19.21	26.84	0.16	2874
R+10	37.9	161.3	0.66	0.36	17.39	0.89	19.2	102.0	2.84	99	3.37	55.63	55.63	0.17	3480
R+10	40.7	102.5	0.66	0.36	18.64	0.95	19.2	69.4	3.03	109	3.37	36.79	57.72	0.18	3715
F+2	6.1	47.3	0.38	0.21	4.86	0.85	3.8	4.8	2.73	18	0.00	14.22	16.52	0.50	1924
F+2	6.0	51.7	0.38	0.21	4.75	0.84	3.7	5.1	2.70	18	0.00	15.31	18.08	0.49	1902
F+4	14.2	61.6	0.49	0.27	8.75	1.13	4.6	14.5	3.61	34	0.00	35.04	45.74	0.40	3284
F+4	14.4	59.9	0.49	0.27	8.90	1.14	4.6	14.4	3.64	35	0.00	34.42	44.49	0.40	3310
F+6	20.2	55.5	0.57	0.31	10.74	0.94	7.8	18.7	3.01	44	0.00	26.52	34.54	0.24	3186
F+6	20.0	65.4	0.57	0.31	10.64	0.94	7.8	21.9	3.00	43	0.00	31.23	43.40	0.24	3178
F+6	20.2	55.5	0.57	0.31	10.74	0.75	10.4	18.7	2.38	41	0.00	19.95	26.61	0.19	2522
F+6	20.0	65.4	0.57	0.31	10.64	0.74	10.4	21.9	2.36	41	0.00	23.30	33.43	0.19	2502
F+8	29.5	86.0	0.56	0.31	15.94	1.03	10.8	42.3	3.29	70	0.00	43.33	66.72	0.28	3424
F+8	27.6	64.1	0.56	0.31	14.89	0.98	10.8	29.4	3.12	64	0.00	30.39	40.78	0.26	3244
F+10	42.8	83.8	0.65	0.36	19.91	1.23	11.1	59.8	3.91	93	0.00	59.57	95.56	0.24	4726
F+10	38.7	82.1	0.65	0.36	18.02	1.14	11.0	53.0	3.63	82	0.00	53.53	86.37	0.23	4378

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 96.95 Kinematic Viscosity = 0.897 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 77.46 g/mn/m^2

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 1	slope = 7.61 %														
R+0	3.5	168.7	0.33	0.23	2.54	0.21	12.1	9.8	1.56	23	3.62	5.40	10.15	0.24	536
R+2	11.3	363.5	0.59	0.41	4.61	0.36	12.7	68.3	2.68	54	3.39	56.40	56.40	0.13	1638
R+2	11.6	319.9	0.59	0.41	4.74	0.37	12.7	61.9	2.76	56	3.39	50.76	50.76	0.13	1683
R+4	20.6	328.0	0.43	0.30	11.63	0.81	13.3	112.5	6.03	191	3.17	90.78	135.81	0.56	2664
R+4	21.0	334.9	0.43	0.30	11.84	0.82	13.3	117.0	6.11	195	3.17	94.49	142.95	0.56	2697
R+6	31.1	236.8	0.47	0.32	16.21	1.00	15.1	122.6	7.45	298	2.64	87.48	113.37	0.58	3562
R+6	26.3	330.4	0.47	0.32	13.73	0.84	15.1	144.9	6.26	229	2.64	103.85	162.30	0.49	2992
R+8	32.0	244.7	0.45	0.31	17.20	0.97	17.5	130.6	7.22	330	2.09	80.64	103.28	0.60	3357
R+8	37.7	292.2	0.45	0.31	20.23	1.10	17.5	183.5	8.19	399	2.09	114.13	152.89	0.68	3806
F+2	6.1	50.7	0.33	0.23	4.41	0.58	7.0	5.1	4.35	61	0.00	8.22	8.58	0.66	1494
F+2	6.1	39.7	0.33	0.23	4.43	0.59	7.0	4.0	4.36	61	0.00	6.45	6.67	0.66	1499
F+4	15.5	106.6	0.47	0.33	7.94	0.85	8.4	27.6	6.35	131	0.00	36.31	40.77	0.48	3098
F+4	16.3	92.2	0.47	0.33	8.35	0.88	8.6	25.1	6.54	140	0.00	32.44	35.76	0.49	3195
F+6	21.9	81.9	0.48	0.33	11.07	1.04	9.6	29.9	7.74	200	0.00	34.65	37.53	0.57	3818
F+6	22.3	66.3	0.48	0.33	11.26	1.05	9.7	24.6	7.79	204	0.00	28.19	30.04	0.58	3840
F+6	21.9	81.9	0.48	0.33	11.07	1.12	8.3	29.9	8.32	193	0.00	40.01	43.47	0.61	4104
F+6	22.3	66.3	0.48	0.33	11.26	1.13	8.3	24.6	8.42	197	0.00	32.83	35.07	0.62	4151
F+8	27.8	51.6	0.52	0.36	13.01	1.24	8.6	23.9	9.26	234	0.00	30.99	32.69	0.59	4929
F+8	28.0	50.9	0.52	0.36	13.11	1.25	8.6	23.7	9.30	236	0.00	30.79	32.46	0.59	4953
F+10	39.7	46.4	0.54	0.37	17.99	1.52	9.2	30.7	11.33	339	0.00	37.15	38.94	0.67	6237
F+10	40.6	40.4	0.54	0.37	18.41	1.54	9.2	27.4	11.51	348	0.00	33.07	34.44	0.68	6333
Rill 2	slope = 7.44 %														
R+0	3.1	173.8	0.32	0.22	2.39	0.25	9.7	9.0	1.82	23	4.84	5.49	8.38	0.31	604
R+2	11.7	380.1	0.55	0.38	5.20	0.39	13.3	74.2	2.84	62	3.17	58.76	58.76	0.16	1631
R+2	10.9	307.7	0.55	0.38	4.83	0.36	13.3	55.7	2.62	55	3.17	43.31	79.84	0.15	1505
R+4	20.6	288.7	0.45	0.31	11.13	0.76	13.9	99.2	5.53	176	2.98	76.24	97.50	0.47	2614
R+4	20.5	267.3	0.45	0.31	11.06	0.76	13.9	91.2	5.53	176	2.98	69.85	86.58	0.47	2614
R+6	27.4	292.0	0.52	0.36	12.88	0.78	15.7	133.6	5.68	206	2.48	91.86	128.60	0.36	3087
R+6	29.6	316.6	0.52	0.36	13.87	0.83	15.7	155.9	6.04	227	2.48	107.66	157.48	0.38	3285
R+8	31.9	256.7	0.58	0.40	13.26	0.76	16.9	136.4	5.53	214	2.21	87.23	122.53	0.28	3394
R+8	39.8	283.3	0.58	0.40	16.58	0.90	16.9	188.1	6.55	275	2.21	121.18	180.00	0.33	4019

RILL DATA ANALYSIS SOIL: WOODWARD DATE: JUNE 1, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 7.44 %														
F+2	5.7	46.1	0.31	0.21	4.50	0.61	7.0	4.4	4.41	63	0.00	6.97	7.22	0.79	1432
F+2	5.9	57.3	0.31	0.21	4.62	0.62	7.1	5.6	4.49	65	0.00	8.81	9.22	0.80	1457
F+4	15.1	117.8	0.41	0.28	8.97	0.83	9.5	29.6	6.01	136	0.00	34.59	39.02	0.62	2573
F+4	16.1	104.2	0.41	0.28	9.57	0.87	9.6	27.9	6.30	148	0.00	32.20	35.69	0.65	2698
F+6	23.7	102.6	0.48	0.33	11.90	1.01	10.1	40.5	7.36	196	0.00	44.51	49.87	0.54	3737
F+6	24.6	66.2	0.48	0.33	12.39	1.04	10.2	27.2	7.57	206	0.00	29.62	31.77	0.55	3844
F+6	23.7	102.6	0.48	0.33	11.90	1.22	7.0	40.5	8.89	180	0.00	64.10	72.59	0.65	4516
F+6	24.6	66.2	0.48	0.33	12.39	1.25	7.1	27.2	9.12	189	0.00	42.83	46.26	0.67	4632
F+8	29.7	73.6	0.49	0.34	14.64	1.39	7.2	36.4	10.09	225	0.00	55.80	60.86	0.71	5222
F+8	30.5	59.0	0.49	0.34	15.04	1.41	7.3	30.0	10.23	232	0.00	45.44	48.65	0.72	5293
F+10	41.4	54.5	0.54	0.37	18.75	1.57	8.0	37.7	11.41	298	0.00	52.39	56.01	0.68	6429
F+10	42.1	49.6	0.54	0.37	19.04	1.58	8.0	34.8	11.49	304	0.00	48.13	51.12	0.68	6477
Rill 3	slope = 6.86 %														
R+0	3.2	162.0	0.30	0.20	2.63	0.21	12.1	8.7	1.41	20	3.62	4.36	4.36	0.27	477
R+2	10.8	415.8	0.53	0.36	4.95	0.33	14.5	75.1	2.22	46	2.80	54.66	54.66	0.13	1342
R+2	11.1	344.4	0.53	0.36	5.07	0.34	14.5	63.7	2.28	49	2.80	45.95	45.95	0.14	1383
R+4	20.2	318.8	0.44	0.30	11.08	0.71	15.1	107.2	4.77	153	2.64	76.11	76.11	0.42	2401
R+4	21.0	310.2	0.44	0.30	11.53	0.73	15.1	108.5	4.90	159	2.64	77.10	77.10	0.43	2468
R+6	26.6	310.3	0.49	0.33	13.30	0.78	15.7	137.7	5.24	183	2.48	94.80	94.80	0.38	2902
R+6	30.4	316.9	0.49	0.33	15.19	0.90	15.7	160.6	6.04	226	2.48	110.98	110.98	0.43	3349
R+8	30.4	270.7	0.54	0.37	13.73	0.79	16.3	137.1	5.30	193	2.35	90.97	90.97	0.31	3250
R+8	37.5	273.6	0.54	0.37	16.95	0.98	16.3	171.1	6.58	267	2.35	114.05	114.05	0.39	4032
F+2	5.8	55.2	0.31	0.22	4.47	0.64	6.1	5.3	4.32	53	0.00	9.68	10.20	0.74	1547
F+2	6.0	71.1	0.31	0.22	4.62	0.66	6.2	7.1	4.42	55	0.00	12.78	13.67	0.76	1584
F+4	15.7	93.5	0.44	0.30	8.66	0.96	7.7	24.5	6.46	123	0.00	35.39	39.49	0.56	3251
F+4	15.8	76.8	0.44	0.30	8.69	0.96	7.7	20.2	6.47	123	0.00	29.14	31.83	0.57	3258
F+6	23.6	91.3	0.45	0.31	12.76	1.23	8.6	35.9	8.29	198	0.00	46.61	51.43	0.70	4248
F+6	22.0	71.2	0.45	0.31	11.89	1.18	8.4	26.1	7.93	182	0.00	34.53	37.27	0.67	4061
F+6	23.6	91.3	0.45	0.31	12.76	0.77	12.8	35.9	5.17	146	0.00	31.13	35.73	0.44	2649
F+6	22.0	71.2	0.45	0.31	11.89	0.72	12.8	26.1	4.86	133	0.00	22.68	25.25	0.41	2489
F+8	29.2	47.1	0.55	0.37	12.97	0.78	12.8	22.9	5.24	149	0.00	19.83	21.52	0.30	3263
F+8	28.2	37.6	0.55	0.37	12.55	0.76	12.8	17.7	5.09	143	0.00	15.34	16.38	0.29	3170

RILL DATA ANALYSIS SOIL: WOODWARD DATE: JUNE 1, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 6.86 %														
R+0	38.9	40.7	0.63	0.43	15.09	0.89	12.9	26.4	5.98	183	0.00	22.70	24.52	0.26	4262
R+2	38.4	39.5	0.63	0.43	14.91	0.88	12.9	25.3	5.92	180	0.00	21.79	23.48	0.26	4219
R+2	3.0	164.7	0.30	0.21	2.44	0.19	12.1	8.3	1.28	17	3.62	3.98	0.00	0.24	436
R+4	10.7	369.4	0.54	0.37	4.85	0.33	13.3	65.8	2.23	43	3.17	51.78	51.78	0.13	1353
R+4	10.2	329.7	0.54	0.37	4.62	0.32	13.3	56.0	2.16	41	3.17	43.61	43.61	0.13	1312
R+6	20.0	293.7	0.45	0.31	10.82	0.66	14.5	97.9	4.45	132	2.80	72.08	72.08	0.38	2265
R+6	18.5	289.7	0.45	0.31	10.02	0.63	14.5	89.4	4.25	123	2.80	65.61	65.61	0.36	2162
R+8	25.7	304.8	0.49	0.33	12.80	0.78	15.1	130.5	5.26	177	2.64	93.24	93.24	0.38	2907
R+8	27.6	272.7	0.49	0.33	13.75	0.82	15.1	125.3	5.53	191	2.64	89.47	89.47	0.40	3056
R+10	30.4	297.0	0.57	0.39	12.96	0.76	16.3	150.4	5.12	184	2.35	100.00	101.77	0.27	3310
R+10	35.3	281.7	0.57	0.39	15.05	0.89	16.3	165.6	6.00	233	2.35	110.33	114.50	0.32	3877
F+2	5.9	36.3	0.29	0.20	4.88	0.64	6.7	3.6	4.33	58	0.00	5.93	6.12	0.86	1435
F+2	5.9	47.2	0.29	0.20	4.88	0.64	6.7	4.6	4.33	58	0.00	7.72	8.04	0.86	1435
F+4	15.4	103.4	0.42	0.29	8.86	0.77	9.1	26.5	5.18	104	0.00	32.28	37.25	0.50	2480
F+4	15.7	103.4	0.42	0.29	9.05	0.78	9.2	27.1	5.27	107	0.00	32.88	37.89	0.50	2522
F+6	22.4	98.9	0.46	0.32	11.74	0.96	9.5	36.9	6.45	151	0.00	42.99	49.28	0.51	3387
F+6	19.9	66.9	0.46	0.32	10.45	0.87	9.4	22.2	5.90	130	0.00	26.42	28.98	0.47	3099
F+6	22.4	98.9	0.46	0.32	11.74	1.15	8.3	36.9	7.77	174	0.00	49.43	55.55	0.62	4081
F+6	19.9	66.9	0.46	0.32	10.45	1.07	8.0	22.2	7.20	151	0.00	30.74	33.27	0.57	3784
F+8	26.9	65.7	0.49	0.34	13.21	1.25	8.5	29.4	8.41	201	0.00	38.57	41.71	0.58	4720
F+8	27.5	48.5	0.49	0.34	13.51	1.27	8.5	22.3	8.54	206	0.00	29.04	30.73	0.59	4791
F+10	38.1	53.3	0.45	0.31	20.33	1.64	9.3	33.8	11.05	332	0.00	40.34	42.55	0.91	5706
F+10	41.0	51.0	0.45	0.31	21.89	1.71	9.5	34.9	11.55	361	0.00	40.82	42.92	0.95	5964
Rill 5	slope = 6.92 %														
R+0	3.2	212.6	0.29	0.20	2.69	0.23	11.5	11.2	1.56	22	3.88	6.97	0.80	0.32	504
R+2	11.2	372.4	0.44	0.30	6.24	0.49	12.1	69.7	3.32	71	3.62	60.34	60.34	0.30	1638
R+2	10.3	306.2	0.44	0.30	5.70	0.45	12.1	52.4	3.05	62	3.62	44.46	44.46	0.27	1504
R+4	19.1	343.4	0.41	0.28	11.43	0.72	15.1	109.6	4.88	158	2.64	77.88	77.88	0.50	2242
R+4	21.8	317.3	0.41	0.28	13.03	0.81	15.1	115.4	5.49	188	2.64	82.20	82.20	0.56	2522
R+6	27.9	340.0	0.47	0.32	14.48	0.89	15.1	158.3	6.03	217	2.64	113.71	114.78	0.47	3190
R+6	28.9	340.5	0.47	0.32	14.99	0.91	15.1	164.1	6.16	224	2.64	117.94	120.56	0.48	3262
R+8	37.8	333.6	0.58	0.40	15.69	0.89	15.7	210.1	6.03	226	2.48	145.94	174.91	0.30	3982
R+8	39.1	353.6	0.58	0.40	16.25	0.92	15.7	230.6	6.23	237	2.48	160.42	203.98	0.31	4117

RILL DATA ANALYSIS SOIL: WOODWARD DATE: JUNE 1, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 6.92 %														
F+2	6.1	62.5	0.34	0.23	4.32	0.60	5.9	6.3	4.06	47	0.00	11.94	12.83	0.59	1566
F+2	6.1	68.1	0.34	0.23	4.32	0.60	5.9	6.9	4.06	47	0.00	12.99	14.05	0.59	1566
F+4	14.6	143.1	0.47	0.32	7.60	0.61	10.6	34.9	4.13	86	0.00	36.59	46.91	0.32	2182
F+4	15.5	100.0	0.47	0.32	8.04	0.64	10.7	25.8	4.32	93	0.00	26.79	31.37	0.34	2283
F+6	24.2	79.5	0.51	0.35	11.57	0.85	11.5	32.1	5.75	154	0.00	31.00	34.78	0.38	3302
F+6	22.8	72.1	0.51	0.35	10.90	0.81	11.4	27.4	5.49	142	0.00	26.85	29.85	0.36	3155
F+6	24.2	79.5	0.51	0.35	11.57	1.08	9.6	32.1	7.29	184	0.00	36.98	40.63	0.48	4191
F+6	22.8	72.1	0.51	0.35	10.90	1.03	9.5	27.4	7.00	171	0.00	32.09	34.99	0.46	4024
F+8	27.9	50.2	0.51	0.35	13.30	1.18	10.0	23.3	8.01	220	0.00	25.90	27.38	0.53	4606
F+8	28.2	39.9	0.51	0.35	13.43	1.19	10.0	18.7	8.05	222	0.00	20.71	21.64	0.53	4631
F+10	37.2	38.2	0.46	0.32	19.53	1.46	11.8	23.6	9.90	356	0.00	22.32	23.09	0.79	5169
F+10	38.7	37.9	0.46	0.32	20.36	1.50	11.9	24.5	10.16	374	0.00	22.79	23.57	0.81	5301
Rill 6	slope = 7.1 %														
R+0	3.0	255.4	0.30	0.20	2.48	0.21	10.9	13.0	1.46	19	4.16	9.05	0.00	0.28	479
R+2	11.1	388.3	0.46	0.31	5.89	0.44	12.7	71.8	3.06	66	3.39	59.42	59.42	0.25	1539
R+2	10.8	314.9	0.46	0.31	5.75	0.43	12.7	56.8	2.99	64	3.39	46.34	46.34	0.24	1504
R+4	18.9	312.6	0.42	0.29	10.96	0.73	14.5	98.4	5.07	161	2.80	72.53	72.53	0.49	2338
R+4	20.0	279.8	0.42	0.29	11.61	0.77	14.5	93.3	5.35	174	2.80	68.59	68.59	0.52	2466
R+6	27.8	311.7	0.44	0.30	15.29	0.92	15.7	144.5	6.39	246	2.48	99.57	109.09	0.56	3109
R+6	27.9	309.3	0.44	0.30	15.35	0.92	15.7	143.9	6.39	246	2.48	99.13	108.44	0.56	3109
R+8	33.7	316.1	0.50	0.35	16.29	0.93	16.9	177.8	6.46	270	2.21	114.38	136.27	0.43	3579
R+8	34.9	337.0	0.50	0.35	16.84	0.96	16.9	195.9	6.67	283	2.21	126.25	156.36	0.45	3695
F+2	6.2	73.7	0.31	0.21	4.84	0.51	5.6	7.6	3.58	37	0.00	15.14	16.98	0.63	1227
F+2	6.2	107.0	0.31	0.21	4.80	0.51	5.6	11.0	3.55	36	0.00	21.83	26.00	0.62	1218
F+4	16.0	152.3	0.45	0.31	8.61	0.73	7.2	40.6	5.09	80	0.00	62.36	86.76	0.43	2528
F+4	15.3	95.7	0.45	0.31	8.23	0.73	6.7	24.4	5.09	75	0.00	40.15	48.54	0.43	2527
F+6	22.9	84.9	0.47	0.32	11.85	0.91	8.2	32.4	6.32	126	0.00	44.03	50.90	0.49	3267
F+6	21.4	68.9	0.47	0.32	11.10	0.87	8.0	24.6	6.05	115	0.00	34.33	38.62	0.47	3128
F+6	22.9	84.9	0.47	0.32	11.85	1.20	7.9	32.4	8.31	184	0.00	45.37	49.90	0.64	4296
F+6	21.4	68.9	0.47	0.32	11.10	1.15	7.8	24.6	7.96	171	0.00	34.91	37.70	0.62	4115
F+8	29.7	47.9	0.49	0.34	14.66	1.36	8.4	23.7	9.45	237	0.00	31.32	32.99	0.66	5124
F+8	28.2	40.8	0.49	0.34	13.91	1.32	8.2	19.2	9.20	223	0.00	25.90	27.09	0.65	4987
F+10	36.7	37.2	0.49	0.34	18.20	1.52	9.2	22.7	10.55	307	0.00	27.37	28.44	0.75	5688
F+10	37.6	25.2	0.49	0.34	18.67	1.54	9.3	15.8	10.69	316	0.00	18.85	19.33	0.76	5762

RILL DATA ANALYSIS SOIL: HEIDEN DATE: JUNE 6, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 88.28 Kinematic Viscosity = 0.916 x 10^{-6} m^2/s
Velocity Factor = 0.551 D_i = 18.62 g/mn/m^2

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 1	slope = 4.12 %														
R+0	2.8	36.1	0.08	0.04	10.51	0.94	10.5	1.7	3.79	68	1.06	0.72	1.60	15.64	452
R+2	9.0	66.0	0.22	0.12	12.36	0.90	12.9	9.9	3.63	79	0.80	7.71	8.09	1.98	1191
R+2	9.1	49.1	0.22	0.12	12.48	0.90	12.9	7.4	3.63	79	0.80	5.60	5.99	1.98	1191
R+4	17.4	69.6	0.27	0.15	19.44	1.17	15.4	20.1	4.72	139	0.62	13.93	15.20	1.71	1900
R+4	16.0	66.8	0.27	0.15	17.90	1.09	15.4	17.8	4.39	125	0.62	12.23	13.30	1.59	1770
R+6	24.5	66.4	0.35	0.19	21.15	1.20	16.6	27.1	4.84	156	0.55	17.59	19.36	1.04	2526
R+6	22.9	75.3	0.35	0.19	19.80	1.13	16.6	28.7	4.56	143	0.55	18.69	20.76	0.98	2379
R+8	34.6	52.5	0.38	0.21	27.52	1.39	17.8	30.2	5.60	209	0.49	18.35	20.00	1.03	3177
R+8	30.6	66.9	0.38	0.21	24.40	1.26	17.8	34.2	5.08	180	0.49	20.82	23.10	0.93	2880
R+10	36.3	95.3	0.45	0.25	24.41	1.17	20.9	57.7	4.72	189	0.37	30.29	35.75	0.62	3167
R+10	40.3	75.3	0.45	0.25	27.08	1.27	20.9	50.6	5.12	214	0.37	26.52	30.15	0.67	3438
F+2	5.5	50.4	0.25	0.14	6.61	0.85	4.2	4.6	3.43	24	0.00	12.05	13.39	1.45	1280
F+2	5.6	43.0	0.25	0.14	6.80	0.86	4.3	4.0	3.48	25	0.00	10.37	11.32	1.47	1297
F+4	13.8	55.6	0.35	0.19	11.95	0.83	9.6	12.8	3.33	52	0.00	14.79	16.99	0.72	1741
F+4	14.3	51.6	0.35	0.19	12.33	0.83	10.0	12.3	3.34	54	0.00	13.57	15.39	0.72	1743
F+6	19.7	45.7	0.35	0.19	16.99	0.75	17.0	15.0	3.03	79	0.00	9.81	10.87	0.65	1581
F+6	13.4	45.2	0.35	0.19	11.58	0.83	9.2	10.1	3.33	49	0.00	12.16	13.60	0.72	1740
F+6	19.7	45.7	0.35	0.19	16.99	0.81	16.3	15.0	3.25	84	0.00	10.22	11.25	0.70	1697
F+6	13.4	45.2	0.35	0.19	11.58	0.95	9.8	10.1	3.85	65	0.00	11.39	12.36	0.83	2008
F+8	28.0	36.3	0.41	0.23	20.67	0.95	16.9	17.0	3.81	111	0.00	11.15	12.09	0.60	2332
F+8	28.2	34.2	0.41	0.23	20.82	0.95	16.9	16.1	3.83	112	0.00	10.55	11.39	0.60	2345
F+10	36.5	42.7	0.43	0.24	25.70	1.07	18.7	26.0	4.30	147	0.00	15.44	17.00	0.61	2757
F+10	35.4	43.4	0.43	0.24	24.93	1.04	18.7	25.7	4.19	141	0.00	15.28	16.86	0.60	2685
Rill 2	slope = 4.00 %														
R+0	4.9	25.9	0.12	0.07	12.28	1.02	11.1	2.1	3.99	78	0.98	1.14	1.01	7.32	736
R+2	12.3	29.4	0.21	0.12	17.77	1.16	14.1	6.0	4.54	121	0.70	4.04	4.28	2.72	1465
R+2	12.3	39.2	0.21	0.12	17.66	1.16	14.1	8.0	4.54	121	0.70	5.60	5.72	2.72	1465
R+4	20.2	34.5	0.27	0.15	22.63	1.36	15.4	11.6	5.32	167	0.62	7.79	8.25	1.93	2209
R+4	19.7	27.5	0.27	0.15	22.08	1.34	15.4	9.0	5.25	163	0.62	5.91	6.35	1.90	2176
R+6	27.0	32.2	0.33	0.18	24.75	1.36	17.2	14.5	5.32	187	0.52	8.84	9.30	1.29	2700
R+6	26.6	41.1	0.33	0.18	24.35	1.34	17.2	18.2	5.25	183	0.52	11.22	11.77	1.27	2660
R+8	35.2	27.4	0.37	0.20	28.82	1.35	19.7	16.1	5.28	211	0.42	8.67	9.09	1.02	3005
R+8	33.7	30.7	0.37	0.20	27.57	1.30	19.7	17.3	5.09	199	0.42	9.34	9.76	0.98	2893
R+10	38.3	66.1	0.38	0.21	30.46	1.37	20.9	42.1	5.36	229	0.37	22.03	23.92	0.98	3132
R+10	42.9	37.0	0.38	0.21	34.15	1.51	20.9	26.4	5.91	265	0.37	13.68	14.45	1.08	3452

RILL DATA ANALYSIS SOIL: HEIDEN DATE: JUNE 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 4.00 %														
F+2	7.7	42.7	0.23	0.13	10.19	0.47	19.7	5.5	1.86	44	0.00	3.11	3.32	0.93	657
F+2	8.2	35.4	0.23	0.13	10.85	0.50	19.7	4.9	1.97	48	0.00	2.74	2.89	0.98	696
F+4	16.2	33.8	0.29	0.16	16.85	0.76	20.0	9.1	2.97	90	0.00	5.07	5.35	0.93	1324
F+4	16.3	29.7	0.29	0.16	16.98	0.76	20.0	8.1	2.99	91	0.00	4.48	4.69	0.94	1334
F+6	20.7	28.8	0.31	0.17	20.22	0.90	20.1	9.9	3.51	117	0.00	5.51	5.76	0.96	1672
F+6	13.9	30.3	0.31	0.17	13.58	0.62	19.8	7.0	2.43	66	0.00	3.93	4.16	0.67	1159
F+6	20.7	28.8	0.31	0.17	20.22	0.86	18.0	9.9	3.38	99	0.00	6.13	6.46	0.93	1610
F+6	13.9	30.3	0.31	0.17	13.58	1.09	8.6	7.0	4.28	68	0.00	9.02	9.52	1.18	2040
F+8	29.0	27.5	0.33	0.18	26.55	1.10	18.3	13.3	4.30	144	0.00	8.04	8.44	1.04	2179
F+8	29.3	24.7	0.33	0.18	26.84	1.11	18.3	12.0	4.34	146	0.00	7.29	7.61	1.05	2200
F+10	36.9	18.9	0.36	0.20	31.03	1.26	18.5	11.6	4.91	178	0.00	6.99	7.23	1.00	2719
F+10	36.0	17.9	0.36	0.20	30.25	1.23	18.5	10.7	4.81	172	0.00	6.44	6.65	0.98	2660
Rill 3	slope = 3.86 %														
R+0	3.3	17.9	0.11	0.06	9.18	0.72	11.7	1.0	2.72	46	0.91	0.04	0.00	5.94	476
R+2	10.1	17.7	0.24	0.13	12.73	0.80	14.1	3.0	3.02	66	0.70	1.64	1.20	1.39	1155
R+2	9.6	16.6	0.24	0.13	12.10	0.77	14.1	2.7	2.91	62	0.70	1.39	0.00	1.33	1112
R+4	17.6	49.6	0.28	0.15	19.00	1.08	16.0	14.6	4.08	116	0.58	9.53	10.30	1.37	1819
R+4	15.8	30.7	0.28	0.15	17.04	0.98	16.0	8.1	3.70	100	0.58	5.04	5.46	1.25	1651
R+6	24.5	54.5	0.33	0.18	22.49	1.19	17.2	22.3	4.50	145	0.52	13.86	15.12	1.09	2362
R+6	28.2	45.8	0.33	0.18	25.82	1.33	17.2	21.5	5.02	171	0.52	13.37	14.49	1.22	2640
R+8	32.2	68.2	0.38	0.21	25.64	1.31	18.4	36.6	4.95	179	0.46	21.60	24.12	0.91	2994
R+8	31.5	56.0	0.38	0.21	25.04	1.29	18.4	29.4	4.87	175	0.46	17.22	18.91	0.89	2949
R+10	37.6	45.6	0.42	0.23	27.07	1.27	20.3	28.6	4.80	188	0.39	15.24	16.61	0.72	3209
R+10	39.7	95.2	0.42	0.23	28.62	1.33	20.3	63.0	5.02	202	0.39	34.12	40.55	0.75	3360
F+2	6.6	44.7	0.25	0.14	8.04	0.79	8.7	4.9	2.97	39	0.00	6.30	6.74	1.26	1182
F+2	6.6	53.8	0.25	0.14	8.04	0.79	8.7	6.0	2.97	39	0.00	7.59	8.23	1.26	1182
F+4	14.1	47.3	0.35	0.19	12.18	1.05	9.8	11.1	3.96	68	0.00	12.59	13.74	0.85	2204
F+4	14.7	46.0	0.35	0.19	12.69	0.70	17.6	11.3	2.65	67	0.00	7.11	7.79	0.57	1474
F+6	19.4	47.3	0.35	0.19	16.75	0.87	18.7	15.3	3.28	98	0.00	9.11	9.90	0.71	1827
F+6	13.6	45.0	0.35	0.19	11.79	1.02	9.7	10.2	3.87	65	0.00	11.72	12.75	0.83	2157
F+6	19.4	47.3	0.35	0.19	16.75	1.14	11.9	15.3	4.31	94	0.00	14.28	15.59	0.93	2403
F+6	13.6	45.0	0.35	0.19	11.79	0.90	10.6	10.2	3.40	59	0.00	10.73	11.79	0.73	1896
F+8	28.4	40.7	0.39	0.21	22.00	1.17	15.4	19.2	4.40	126	0.00	13.85	15.03	0.76	2735
F+8	27.8	36.2	0.39	0.21	21.52	1.15	15.4	16.7	4.33	122	0.00	12.09	13.00	0.75	2687
F+10	36.2	27.6	0.34	0.19	32.17	1.56	16.4	16.7	5.90	208	0.00	11.25	11.73	1.35	3197
F+10	35.3	26.3	0.34	0.19	31.39	1.54	16.4	15.5	5.80	202	0.00	10.51	10.94	1.33	3140

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 4	slope = 3.58 %														
R+0	4.6	15.6	0.11	0.06	12.78	0.98	11.7	1.2	3.43	66	0.91	0.24	0.73	7.50	648
R+2	11.2	17.8	0.23	0.13	14.74	1.07	13.5	3.3	3.75	87	0.75	2.00	2.27	1.87	1480
R+2	10.9	24.3	0.23	0.13	14.38	1.06	13.5	4.4	3.71	85	0.75	2.90	3.00	1.85	1467
R+4	17.8	42.0	0.26	0.14	20.68	1.27	15.4	12.4	4.45	127	0.62	8.37	8.66	1.74	1986
R+4	18.4	27.9	0.26	0.14	21.36	1.29	15.4	8.5	4.52	130	0.62	5.56	5.88	1.77	2018
R+6	26.6	44.5	0.30	0.17	26.79	1.48	16.6	19.7	5.19	173	0.55	12.65	13.31	1.52	2671
R+6	24.6	39.2	0.30	0.17	24.83	1.41	16.6	16.1	4.94	161	0.55	10.22	10.70	1.45	2544
R+8	32.6	35.9	0.33	0.18	29.84	1.45	19.1	19.5	5.08	193	0.44	10.93	11.48	1.23	2878
R+8	32.1	34.6	0.33	0.18	29.47	1.43	19.1	18.5	5.01	189	0.44	10.35	10.86	1.22	2839
R+10	38.7	40.9	0.33	0.18	35.48	1.59	20.9	26.4	5.57	243	0.37	13.65	14.41	1.35	3156
R+10	41.5	27.4	0.33	0.18	38.01	1.67	20.9	18.9	5.85	261	0.37	9.68	10.17	1.42	3315
F+2	6.7	13.5	0.21	0.12	9.66	1.03	4.6	1.5	3.60	27	0.00	3.69	3.80	2.16	1298
F+2	7.0	10.7	0.21	0.12	10.06	1.04	4.8	1.2	3.63	29	0.00	2.89	2.95	2.17	1309
F+4	14.0	17.8	0.26	0.14	16.32	0.76	16.5	4.2	2.67	64	0.00	2.80	2.80	1.04	1193
F+4	14.3	12.4	0.26	0.14	16.62	0.77	16.6	3.0	2.70	65	0.00	1.97	1.97	1.06	1207
F+6	19.7	13.5	0.29	0.16	20.56	0.90	17.9	4.4	3.14	88	0.00	2.76	2.83	0.99	1566
F+6	13.7	13.3	0.29	0.16	14.27	1.11	7.4	3.0	3.91	50	0.00	4.56	4.70	1.23	1945
F+6	19.7	13.5	0.29	0.16	20.56	1.45	11.0	4.4	5.09	111	0.00	4.49	4.58	1.60	2533
F+6	13.7	13.3	0.29	0.16	14.27	1.17	9.7	3.0	4.10	71	0.00	3.49	3.56	1.29	2041
F+8	26.3	13.3	0.35	0.19	22.75	1.50	11.8	5.8	5.26	126	0.00	5.49	5.62	1.13	3162
F+8	27.5	12.5	0.35	0.19	23.78	1.52	12.3	5.7	5.32	133	0.00	5.19	5.31	1.15	3194
F+10	36.0	27.6	0.32	0.18	34.02	1.33	21.3	16.6	4.66	189	0.00	8.63	9.04	1.20	2559
F+10	33.8	16.5	0.32	0.18	31.96	1.29	21.2	9.3	4.51	179	0.00	4.87	5.00	1.16	2478
Rill 5	slope = 3.55 %														
R+0	4.6	34.6	0.14	0.08	9.94	0.80	11.7	2.7	2.78	48	0.91	1.61	2.25	3.75	674
R+2	11.9	34.6	0.26	0.14	13.90	0.94	13.5	6.9	3.27	70	0.75	4.91	5.54	1.28	1470
R+2	12.1	73.6	0.26	0.14	14.09	0.95	13.5	14.8	3.30	72	0.75	11.46	12.71	1.29	1486
R+4	21.9	55.3	0.40	0.22	16.52	1.09	14.1	20.1	3.79	92	0.70	15.13	17.00	0.63	2623
R+4	19.8	50.9	0.40	0.22	14.98	1.00	14.1	16.8	3.47	81	0.70	12.50	13.93	0.57	2406
R+6	28.5	61.3	0.40	0.22	21.55	1.34	14.8	29.1	4.66	131	0.66	21.29	24.08	0.77	3224
R+6	29.3	54.8	0.40	0.22	22.15	1.37	14.8	26.8	4.76	135	0.66	19.51	21.84	0.79	3296
R+8	38.2	56.1	0.41	0.23	28.20	1.50	17.8	35.8	5.21	187	0.49	21.79	24.27	0.82	3699
R+8	33.7	72.9	0.41	0.23	24.87	1.37	17.8	41.0	4.76	163	0.49	25.03	28.72	0.75	3379
R+10	37.8	64.6	0.50	0.28	22.89	1.13	19.7	40.7	3.93	135	0.42	22.59	26.60	0.41	3399

RILL DATA ANALYSIS SOIL: HEIDEN DATE: JUNE 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - - g/s/m^2 - - ->				
Rill 5	slope = 3.55 %														
F+2	9.0	39.8	0.30	0.17	9.04	0.61	9.3	5.9	2.13	25	0.00	7.14	8.13	0.63	1108
F+2	9.4	35.9	0.30	0.17	9.46	0.63	9.4	5.6	2.20	27	0.00	6.60	7.39	0.65	1143
F+4	17.2	35.1	0.33	0.18	15.73	0.87	12.3	10.0	3.01	57	0.00	9.08	9.99	0.73	1721
F+4	17.2	35.2	0.33	0.18	15.72	0.87	12.3	10.1	3.01	57	0.00	9.13	10.05	0.73	1720
F+6	23.2	32.0	0.36	0.20	19.51	1.00	13.0	12.4	3.48	74	0.00	10.62	11.62	0.71	2169
F+6	15.2	27.0	0.36	0.20	12.76	0.73	11.7	6.8	2.55	42	0.00	6.51	7.10	0.52	1590
F+6	23.2	32.0	0.36	0.20	19.51	1.16	13.7	12.4	4.03	98	0.00	10.02	10.71	0.82	2514
F+6	15.2	27.0	0.36	0.20	12.76	1.08	8.1	6.8	3.74	52	0.00	9.35	10.03	0.76	2332
F+8	31.7	38.7	0.41	0.23	23.35	1.36	14.1	20.4	4.73	128	0.00	16.05	17.48	0.74	3356
F+8	31.2	44.2	0.41	0.23	23.01	1.35	14.1	23.0	4.67	126	0.00	18.10	19.99	0.73	3319
F+10	39.3	39.2	0.40	0.22	29.75	1.28	14.9	25.7	4.44	123	0.00	19.14	21.47	0.73	3074
F+10	37.8	34.0	0.40	0.22	28.55	1.24	14.9	21.4	4.29	117	0.00	16.00	17.67	0.71	2972
Rill 6	slope = 4.02 %														
R+2	5.2	42.9	0.16	0.09	9.79	0.67	13.5	3.7	2.64	51	0.75	2.30	2.53	2.72	645
R+2	7.5	52.2	0.16	0.09	14.19	1.03	13.5	6.5	4.05	97	0.75	4.62	5.27	4.18	991
R+4	16.9	75.7	0.27	0.15	18.93	1.23	14.1	21.3	4.84	133	0.70	16.06	17.60	1.75	1998
R+4	13.7	57.7	0.27	0.15	15.32	1.06	14.1	13.2	4.17	106	0.70	9.64	10.51	1.51	1722
R+6	20.5	55.3	0.32	0.18	19.35	1.25	14.8	18.9	4.92	142	0.66	13.56	14.76	1.27	2406
R+6	19.8	80.4	0.32	0.18	18.71	1.23	14.8	26.5	4.84	139	0.66	19.32	21.40	1.25	2368
R+8	28.7	55.5	0.29	0.16	29.98	1.52	17.8	26.6	5.98	230	0.49	16.08	17.30	1.88	2652
R+8	27.6	112.9	0.29	0.16	28.76	1.52	17.8	51.9	5.98	230	0.49	31.85	35.96	1.88	2652
R+10	31.5	117.4	0.42	0.23	22.65	1.18	18.4	61.5	4.64	163	0.46	36.62	45.15	0.70	2981
F+2	4.4	46.0	0.24	0.13	5.54	0.48	10.7	3.4	1.88	24	0.00	3.50	3.76	0.86	690
F+2	4.5	53.6	0.24	0.13	5.65	0.48	10.7	4.0	1.91	25	0.00	4.14	4.51	0.87	700
F+4	11.5	55.3	0.32	0.18	10.89	0.72	13.8	10.6	2.83	58	0.00	8.55	9.44	0.73	1384
F+4	12.4	60.9	0.32	0.18	11.69	0.76	13.9	12.5	3.00	64	0.00	10.02	11.16	0.77	1470
F+6	17.2	56.6	0.33	0.18	15.79	0.91	15.6	16.3	3.58	93	0.00	11.57	12 71	0.87	1808
F+6	11.2	54.1	0.33	0.18	10.26	0.68	13.7	10.1	2.69	53	0.00	8.17	9.06	0.65	1356
F+6	17.2	56.6	0.33	0.18	15.79	1.25	11.2	16.3	4.90	107	0.00	16.15	17.52	1.19	2475
F+6	11.2	54.1	0.33	0.18	10.26	0.96	9.6	10.1	3.78	62	0.00	11.67	12.73	0.92	1907
F+8	24.7	48.5	0.35	0.19	21.32	1.44	13.1	19.9	5.66	156	0.00	16.87	18.05	1.22	3030
F+8	23.3	44.1	0.35	0.19	20.15	1.37	12.9	17.1	5.39	143	0.00	14.77	15.74	1.16	2887
F+10	32.3	69.2	0.37	0.20	26.45	1.55	14.8	37.3	6.11	197	0.00	28.02	31.06	1.18	3459
F+10	30.1	47.4	0.37	0.20	24.59	1.57	13.6	23.7	6.18	184	0.00	19.45	20.82	1.19	3493

RILL DATA ANALYSIS SOIL: WHITNEY DATE: JUNE 29, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 97.96 Kinematic Viscosity = 0.888 x 10^{-6} m^2/s
Velocity Factor = 0.551 D_i = 43.7 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 7.5 %														
R+0	3.2	72.3	0.24	0.13	4.06	0.72	3.8	3.9	5.28	45	8.22	3.27	0.00	2.42	1072
R+2	9.8	71.9	0.38	0.21	7.80	0.92	7.5	11.7	6.75	129	3.74	13.64	16.51	1.24	2169
R+2	9.9	64.7	0.38	0.21	7.86	0.92	7.5	10.7	6.75	129	3.74	12.04	14.93	1.24	2169
R+4	18.2	120.4	0.50	0.28	11.00	0.95	10.0	36.5	6.97	180	2.63	37.92	42.56	0.74	2947
R+4	16.4	157.4	0.50	0.28	9.92	0.88	10.0	43.0	6.46	161	2.63	45.17	49.91	0.68	2730
R+6	21.6	142.9	0.48	0.26	13.63	1.00	11.9	51.5	7.34	231	2.09	46.09	52.40	0.84	2978
R+6	21.7	140.8	0.48	0.26	13.67	1.00	11.9	50.9	7.34	231	2.09	45.53	51.71	0.84	2978
R+8	26.9	177.9	0.49	0.27	16.61	1.13	12.5	79.8	8.29	292	1.95	68.95	80.81	0.91	3436
R+8	27.5	190.2	0.49	0.27	16.96	1.14	12.5	87.1	8.37	296	1.95	75.47	89.51	0.92	3466
R+10	38.1	197.5	0.67	0.37	17.22	1.17	13.1	125.5	8.59	324	1.83	104.41	131.46	0.51	4864
R+10	36.0	170.8	0.67	0.37	16.24	1.11	13.1	102.4	8.15	299	1.83	84.81	103.40	0.48	4615
F+2	5.0	129.6	0.35	0.19	4.36	0.51	8.0	10.9	3.76	57	0.00	15.05	16.69	0.81	1112
F+2	5.0	108.9	0.35	0.19	4.30	0.51	8.0	9.0	3.72	56	0.00	12.50	13.62	0.80	1100
F+4	12.7	111.5	0.50	0.28	7.67	0.67	4.7	23.6	4.92	50	0.00	56.20	76.09	0.52	2081
F+4	13.4	151.7	0.50	0.28	8.09	0.70	4.7	33.8	5.11	53	0.00	79.82	79.82	0.54	2159
F+6	19.3	175.1	0.53	0.29	11.03	0.86	5.0	56.4	6.28	78	0.00	124.58	124.58	0.59	2815
F+6	20.7	147.0	0.53	0.29	11.81	0.89	5.1	50.7	6.57	84	0.00	110.24	168.67	0.62	2943
F+6	19.3	175.1	0.53	0.29	11.03	0.89	10.3	56.4	6.52	168	0.00	60.67	73.86	0.61	2922
F+6	20.7	147.0	0.53	0.29	11.81	0.94	10.4	50.7	6.90	184	0.00	54.42	63.68	0.65	3092
F+8	26.1	159.6	0.59	0.33	13.37	1.04	10.4	69.4	7.63	215	0.00	74.08	89.47	0.58	3804
F+8	29.1	98.8	0.59	0.33	14.89	1.13	10.5	47.8	8.30	245	0.00	50.81	56.53	0.63	4142
F+10	37.9	83.8	0.61	0.34	18.80	1.35	10.6	53.0	9.91	324	0.00	55.61	60.72	0.70	5113
F+10	35.2	137.2	0.61	0.34	17.46	1.28	10.5	80.5	9.38	297	0.00	84.85	98.98	0.67	4838
Rill 2	slope = 7.7 %														
R+0	3.2	75.6	0.23	0.13	4.16	0.70	4.4	4.0	5.27	52	6.93	3.18	5.36	2.63	999
R+2	8.8	87.4	0.36	0.20	7.36	0.81	7.5	12.7	6.10	111	3.74	15.14	17.63	1.24	1809
R+2	9.5	82.8	0.36	0.20	7.95	0.86	7.5	13.1	6.48	121	3.74	15.60	18.55	1.32	1921
R+4	17.1	116.7	0.47	0.26	10.97	0.91	10.6	33.2	6.86	187	2.43	32.24	36.14	0.82	2654
R+4	15.6	136.2	0.47	0.26	10.05	0.84	10.6	35.4	6.33	166	2.43	34.61	38.61	0.76	2450
R+6	23.2	130.1	0.51	0.28	13.78	0.97	12.5	50.4	7.31	242	1.95	42.81	48.40	0.74	3070
R+6	24.8	115.1	0.51	0.28	14.68	1.03	12.5	47.5	7.76	265	1.95	40.25	45.15	0.79	3259
R+8	28.0	155.1	0.55	0.30	15.43	1.06	13.1	72.5	7.99	290	1.83	59.53	68.72	0.70	3617
R+8	29.9	141.7	0.55	0.30	16.46	1.12	13.1	70.7	8.44	315	1.83	57.97	66.16	0.74	3822
R+10	38.0	185.5	0.71	0.39	16.17	0.99	14.4	117.3	7.46	287	1.61	89.12	112.92	0.39	4361
R+10	37.2	198.1	0.71	0.39	15.83	0.97	14.4	122.7	7.31	278	1.61	93.24	120.68	0.38	4273

RILL DATA ANALYSIS SOIL: WHITNEY DATE: JUNE 29, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 7.7 %														
F+2	4.9	72.2	0.36	0.20	4.11	0.30	13.1	5.9	2.28	44	0.00	4.98	5.35	0.47	677
F+2	4.8	60.1	0.36	0.20	4.03	0.30	13.1	4.8	2.24	43	0.00	4.07	4.31	0.46	664
F+4	12.1	118.9	0.53	0.29	6.91	0.47	13.3	24.0	3.51	86	0.00	20.01	23.47	0.33	1532
F+4	13.1	165.1	0.53	0.29	7.49	0.50	13.3	36.1	3.79	96	0.00	30.08	37.70	0.36	1652
F+6	22.0	111.7	0.52	0.29	12.82	0.81	13.7	41.0	6.12	203	0.00	33.33	37.24	0.60	2622
F+6	20.5	108.5	0.52	0.29	11.93	0.76	13.6	37.1	5.75	184	0.00	30.28	33.82	0.56	2462
F+6	22.0	111.7	0.52	0.29	12.82	0.87	12.4	41.0	6.59	205	0.00	36.87	41.14	0.64	2822
F+6	20.5	108.5	0.52	0.29	11.93	0.82	12.3	37.1	6.20	186	0.00	33.44	37.29	0.61	2653
F+8	27.2	133.3	0.58	0.32	14.18	0.95	12.4	60.4	7.18	234	0.00	54.13	62.63	0.56	3428
F+8	28.5	122.9	0.58	0.32	14.84	0.99	12.4	58.3	7.46	248	0.00	52.15	59.45	0.59	3562
F+10	32.1	164.8	0.59	0.33	16.44	1.08	12.5	88.1	8.12	283	0.00	78.49	94.05	0.62	3946
F+10	34.3	141.6	0.59	0.33	17.57	1.14	12.5	80.9	8.58	308	0.00	71.88	83.40	0.65	4166
Rill 3	slope = 7.7 %														
R+0	3.1	74.5	0.25	0.14	3.07	0.58	4.4	3.8	4.37	39	6.93	2.71	5.21	1.85	900
R+2	9.2	97.4	0.38	0.21	7.36	0.94	6.9	15.0	7.08	127	4.15	20.07	23.34	1.30	2216
R+2	9.7	118.4	0.38	0.21	7.76	0.97	6.9	19.2	7.31	133	4.15	26.92	30.54	1.34	2287
R+4	18.6	109.1	0.49	0.27	11.45	1.05	10.0	33.7	7.91	218	2.63	34.87	38.66	0.87	3192
R+4	17.1	142.4	0.49	0.27	10.57	0.99	10.0	40.6	7.46	200	2.63	42.53	47.54	0.82	3010
R+6	22.4	118.8	0.54	0.30	12.57	0.97	12.5	44.5	7.31	242	1.95	37.56	41.67	0.66	3250
R+6	22.4	122.9	0.54	0.30	12.53	0.97	12.5	45.8	7.31	242	1.95	38.75	43.07	0.66	3250
R+8	29.2	118.8	0.54	0.30	16.36	1.12	13.1	57.8	8.44	315	1.83	47.11	52.29	0.76	3753
R+8	28.3	130.2	0.54	0.30	15.85	1.09	13.1	61.4	8.21	303	1.83	50.14	56.07	0.74	3652
R+10	38.4	138.3	0.75	0.41	15.49	1.02	13.8	88.5	7.69	287	1.71	69.83	82.16	0.36	4747
R+10	35.3	142.3	0.75	0.41	14.23	0.95	13.8	83.7	7.16	258	1.71	65.91	78.00	0.34	4421
F+2	5.3	97.7	0.43	0.24	3.70	0.68	3.3	8.6	5.12	37	0.00	29.29	33.33	0.73	1811
F+2	4.9	183.1	0.43	0.24	3.41	0.65	3.2	14.8	4.90	34	0.00	52.01	68.55	0.70	1736
F+4	13.8	166.4	0.55	0.30	7.59	0.72	9.6	38.3	5.39	118	0.00	44.09	53.27	0.47	2442
F+6	20.0	157.5	0.55	0.30	10.98	0.81	9.8	52.4	6.09	144	0.00	59.48	73.93	0.53	2758
F+6	21.2	161.8	0.55	0.30	11.64	0.85	9.8	57.1	6.39	156	0.00	64.44	80.26	0.56	2894
F+6	20.0	157.5	0.55	0.30	10.98	0.87	11.0	52.4	6.54	180	0.00	52.90	62.50	0.57	2961
F+6	21.2	161.8	0.55	0.30	11.64	0.91	11.1	57.1	6.86	195	0.00	57.36	67.88	0.60	3108
F+8	27.1	175.7	0.56	0.31	14.65	1.09	11.3	79.4	8.25	262	0.00	78.06	92.98	0.69	3803
F+8	30.1	129.8	0.56	0.31	16.25	0.77	19.9	65.1	5.81	273	0.00	36.30	41.46	0.49	2678
F+10	34.6	166.1	0.67	0.37	15.60	1.15	11.4	95.7	8.66	284	0.00	93.38	113.85	0.51	4778
F+10	34.6	126.6	0.67	0.37	15.63	1.15	11.4	73.0	8.67	285	0.00	71.27	82.34	0.51	4785

RILL DATA ANALYSIS SOIL: WHITNEY DATE: JUNE 29, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 7.6 %														
R+0	2.8	75.5	0.24	0.13	3.48	0.61	5.0	3.5	4.54	47	5.98	1.74	0.00	2.08	908
R+2	9.3	77.1	0.35	0.19	8.02	0.85	8.1	11.9	6.32	127	3.40	12.91	15.09	1.36	1846
R+2	9.4	85.8	0.35	0.19	8.13	0.86	8.1	13.5	6.40	129	3.40	15.00	17.24	1.38	1868
R+4	18.5	99.4	0.52	0.29	10.76	0.94	10.0	30.6	6.99	181	2.63	31.42	34.95	0.68	3033
R+4	16.9	139.2	0.52	0.29	9.82	0.88	10.0	39.2	6.55	164	2.63	40.92	45.46	0.64	2839
R+6	22.2	99.8	0.53	0.29	12.66	1.00	11.3	36.9	7.44	224	2.25	34.18	38.06	0.70	3289
R+6	21.7	124.9	0.53	0.29	12.36	0.99	11.3	45.1	7.36	220	2.25	42.27	47.50	0.69	3256
R+8	35.8	170.5	0.54	0.30	20.06	1.40	11.9	101.8	10.41	391	2.09	93.08	108.16	0.94	4691
R+8	35.1	145.4	0.54	0.30	19.68	1.38	11.9	85.1	10.26	383	2.09	77.53	88.35	0.93	4624
R+10	38.9	224.5	0.59	0.33	19.92	1.36	12.5	145.4	10.12	394	1.95	127.32	158.05	0.77	4979
R+10	37.0	221.9	0.59	0.33	18.98	1.33	12.5	136.9	9.89	381	1.95	119.71	147.56	0.75	4869
F+2	4.9	71.9	0.35	0.19	4.21	0.38	9.1	5.8	2.82	42	0.00	7.10	7.64	0.61	823
F+2	4.9	114.3	0.35	0.19	4.25	0.31	13.2	9.4	2.31	45	0.00	7.89	8.84	0.50	674
F+4	13.6	158.3	0.50	0.28	8.25	0.52	13.5	36.0	3.87	100	0.00	29.71	36.78	0.41	1615
F+6	20.6	147.2	0.52	0.29	11.97	0.73	13.7	50.5	5.40	169	0.00	40.84	48.53	0.53	2343
F+6	19.8	147.2	0.52	0.29	11.52	0.70	13.7	48.6	5.22	160	0.00	39.40	46.95	0.51	2266
F+6	20.6	147.2	0.52	0.29	11.97	0.62	18.5	50.5	4.62	180	0.00	30.39	35.68	0.45	2006
F+6	19.8	147.2	0.52	0.29	11.52	0.60	18.4	48.6	4.47	170	0.00	29.31	34.51	0.44	1938
F+8	25.5	150.0	0.50	0.28	15.45	0.72	17.6	63.9	5.34	213	0.00	40.32	47.95	0.56	2226
F+8	28.1	120.1	0.50	0.28	17.03	0.78	17.6	56.4	5.83	243	0.00	35.52	40.41	0.62	2433
F+10	35.8	169.7	0.61	0.34	17.77	0.81	17.6	101.4	6.06	258	0.00	63.83	81.08	0.43	3085
F+10	35.0	117.4	0.61	0.34	17.35	0.80	17.6	68.4	5.93	250	0.00	43.11	50.39	0.42	3019
Rill 5	slope = 6.9 %														
R+0	3.0	76.0	0.23	0.13	3.92	0.67	4.4	3.8	4.52	41	6.93	2.66	0.00	2.26	956
R+2	9.5	89.4	0.38	0.21	7.57	0.88	6.9	14.2	5.94	98	4.15	18.73	18.73	1.09	2075
R+2	9.4	99.0	0.38	0.21	7.49	0.87	6.9	15.5	5.87	96	4.15	20.93	20.93	1.07	2051
R+4	18.0	98.9	0.47	0.26	11.60	1.07	9.4	29.7	7.23	178	2.85	32.32	38.47	0.86	3120
R+4	16.3	99.7	0.47	0.26	10.51	0.99	9.4	27.1	6.69	159	2.85	29.31	35.26	0.80	2887
R+6	19.4	105.4	0.46	0.25	12.74	0.97	11.9	34.0	6.55	195	2.09	29.75	35.00	0.82	2769
R+6	18.5	120.6	0.46	0.25	12.17	0.94	11.9	37.2	6.35	186	2.09	32.70	38.81	0.79	2683
R+8	33.9	136.8	0.55	0.30	18.65	1.26	12.5	77.3	8.51	304	1.95	66.79	79.33	0.74	4300
R+8	27.5	130.4	0.55	0.30	15.14	1.06	12.5	59.9	7.16	234	1.95	51.25	61.43	0.63	3617
R+10	35.8	174.3	0.67	0.37	16.18	1.07	13.1	104.1	7.23	250	1.83	86.27	86.27	0.43	4448
R+10	36.3	174.9	0.67	0.37	16.40	1.08	13.1	105.9	7.29	253	1.83	87.79	87.79	0.43	4490

RILL DATA ANALYSIS SOIL: WHITNEY DATE: JUNE 29, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 6.9 %														
F+2	4.8	98.0	0.39	0.21	3.69	0.50	3.5	7.8	3.38	22	0.00	24.46	30.34	0.59	1212
F+2	5.1	91.0	0.39	0.21	3.92	0.52	3.6	7.7	3.51	23	0.00	23.46	28.42	0.61	1259
F+4	13.5	113.6	0.58	0.32	7.02	0.67	9.4	25.5	4.55	89	0.00	30.23	35.62	0.36	2423
F+4	13.7	119.6	0.58	0.32	7.16	0.68	9.4	27.4	4.62	91	0.00	32.43	38.56	0.36	2463
F+6	18.9	152.0	0.57	0.31	10.02	0.90	9.6	47.9	6.10	141	0.00	55.66	67.99	0.50	3195
F+6	18.0	121.1	0.57	0.31	9.53	0.87	9.5	36.3	5.86	132	0.00	42.30	49.43	0.48	3068
F+6	18.9	152.0	0.57	0.31	10.02	0.67	13.2	47.9	4.52	124	0.00	40.24	50.79	0.37	2369
F+6	18.0	121.1	0.57	0.31	9.53	0.64	13.2	36.3	4.32	116	0.00	30.51	36.57	0.35	2265
F+8	25.9	153.4	0.59	0.33	13.25	0.86	13.3	66.1	5.79	181	0.00	55.35	68.86	0.44	3139
F+8	24.7	117.8	0.59	0.33	12.66	0.82	13.3	48.5	5.56	170	0.00	40.63	47.80	0.42	3016
F+10	31.9	167.6	0.63	0.35	15.30	0.97	13.3	89.0	6.55	219	0.00	74.26	95.33	0.44	3793
F+10	30.8	140.0	0.63	0.35	14.77	0.94	13.3	71.8	6.36	209	0.00	59.96	73.46	0.42	3681
Rill 6	slope = 6.8 %														
R+0	3.3	73.3	0.25	0.14	3.97	0.58	5.6	4.0	3.86	42	5.23	2.68	4.45	1.63	900
R+2	9.5	96.5	0.39	0.21	7.40	0.70	9.4	15.3	4.66	92	2.85	15.32	17.10	0.81	1694
R+2	9.9	90.7	0.39	0.21	7.65	0.72	9.4	14.9	4.79	96	2.85	14.82	16.77	0.83	1742
R+4	16.3	145.6	0.50	0.28	9.89	0.81	11.3	39.6	5.39	138	2.25	36.90	42.51	0.57	2513
R+4	16.9	112.4	0.50	0.28	10.21	0.83	11.3	31.6	5.52	143	2.25	28.98	32.78	0.58	2575
R+6	20.8	118.1	0.50	0.28	12.58	0.88	13.1	40.9	5.86	182	1.83	32.82	37.24	0.62	2730
R+6	21.1	130.6	0.50	0.28	12.76	0.89	13.1	45.9	5.92	185	1.83	37.02	42.38	0.63	2761
R+8	32.7	121.0	0.54	0.30	18.33	1.05	14.4	66.0	6.99	260	1.61	49.41	56.99	0.63	3518
R+8	28.5	129.2	0.54	0.30	15.98	0.93	14.4	61.4	6.19	217	1.61	45.89	53.54	0.56	3116
R+10	33.5	101.9	0.60	0.33	16.90	0.98	15.0	56.9	6.52	245	1.51	40.65	46.37	0.48	3649
R+10	34.3	92.1	0.60	0.33	17.31	1.00	15.0	52.7	6.65	252	1.51	37.55	42.42	0.49	3723
F+2	4.7	77.5	0.39	0.21	3.63	0.40	7.0	6.0	2.63	29	0.00	9.55	10.69	0.46	956
F+2	4.9	70.5	0.39	0.21	3.81	0.41	7.2	5.8	2.71	31	0.00	8.93	9.86	0.47	986
F+4	12.6	77.7	0.53	0.29	7.19	0.52	11.3	16.3	3.47	72	0.00	16.00	18.15	0.33	1715
F+4	12.9	122.5	0.53	0.29	7.35	0.53	11.4	26.3	3.54	74	0.00	25.74	31.81	0.33	1748
F+6	18.4	94.6	0.54	0.30	10.31	0.71	11.7	29.0	4.74	118	0.00	27.58	31.64	0.43	2388
F+6	18.8	106.8	0.54	0.30	10.55	0.73	11.7	33.5	4.84	122	0.00	31.80	37.17	0.44	2436
F+6	18.4	94.6	0.54	0.30	10.31	0.81	9.9	29.0	5.36	120	0.00	32.71	37.45	0.49	2699
F+6	18.8	106.8	0.54	0.30	10.55	0.82	9.9	33.5	5.46	124	0.00	37.68	43.95	0.49	2750
F+8	24.4	118.1	0.54	0.30	13.66	1.00	10.3	48.0	6.69	174	0.00	51.93	60.77	0.61	3367
F+8	24.9	101.8	0.54	0.30	13.96	1.02	10.3	42.3	6.80	179	0.00	45.56	51.97	0.62	3422
F+10	31.3	134.1	0.58	0.32	16.33	1.15	10.6	70.0	7.65	219	0.00	73.42	88.43	0.60	4136
F+10	31.4	101.4	0.58	0.32	16.38	1.15	10.6	53.1	7.66	220	0.00	55.65	63.67	0.60	4144

RILL DATA ANALYSIS SOIL: ACADEMY DATE: JUNE 30, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 90.32 Kinematic Viscosity = 0.974 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 43.6 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 3.8 %														
R+0	3.8	33.2	0.20	0.14	4.62	0.53	8.1	2.1	1.97	20	3.39	0.00	0.97	0.83	753
R+2	10.4	29.3	0.38	0.26	6.61	0.54	11.9	5.1	2.01	31	2.09	2.65	2.33	0.24	1447
R+2	11.4	30.6	0.38	0.26	7.31	0.60	11.9	5.8	2.23	36	2.09	3.38	3.45	0.26	1608
R+4	18.9	28.5	0.43	0.30	10.64	0.72	14.4	9.0	2.68	57	1.60	5.33	5.76	0.25	2184
R+4	18.8	31.3	0.43	0.30	10.60	0.72	14.4	9.8	2.68	57	1.60	5.98	6.34	0.25	2184
R+6	25.3	27.0	0.43	0.30	14.26	0.91	15.0	11.4	3.38	84	1.50	6.93	7.76	0.31	2760
R+6	24.3	25.1	0.43	0.30	13.72	0.88	15.0	10.2	3.27	80	1.50	6.02	6.83	0.30	2669
R+8	30.4	35.4	0.44	0.30	16.77	0.98	15.6	17.9	3.64	98	1.41	11.35	12.35	0.32	3041
R+8	32.7	32.3	0.44	0.30	18.03	1.04	15.6	17.6	3.87	107	1.41	11.08	12.13	0.34	3228
R+10	40.9	27.9	0.53	0.36	18.70	0.93	18.8	19.0	3.46	109	1.06	10.20	11.09	0.21	3477
R+10	40.6	28.5	0.53	0.36	18.60	0.93	18.8	19.3	3.46	109	1.06	10.36	11.26	0.21	3477
F+2	5.6	9.9	0.30	0.21	4.53	0.39	11.4	0.9	1.46	18	0.00	0.90	0.92	0.28	829
F+2	6.5	9.9	0.30	0.21	5.25	0.44	11.7	1.1	1.64	22	0.00	1.02	1.05	0.31	932
F+4	14.7	22.1	0.42	0.29	8.48	0.61	13.7	5.4	2.25	42	0.00	4.38	4.69	0.22	1795
F+4	15.0	20.9	0.42	0.29	8.69	0.62	13.7	5.2	2.30	43	0.00	4.24	4.52	0.22	1832
F+6	20.7	24.0	0.51	0.35	9.83	0.68	14.0	8.3	2.55	51	0.00	6.57	7.16	0.17	2463
F+6	20.7	24.2	0.51	0.35	9.86	0.69	14.0	8.4	2.55	51	0.00	6.66	7.27	0.17	2470
F+6	20.7	24.0	0.51	0.35	9.83	0.64	15.0	8.3	2.37	49	0.00	6.14	6.71	0.16	2297
F+6	20.7	24.2	0.51	0.35	9.86	0.64	15.0	8.4	2.38	50	0.00	6.22	6.81	0.16	2302
F+8	27.0	17.7	0.49	0.34	13.37	0.80	16.2	8.0	2.97	75	0.00	5.45	5.76	0.21	2761
F+8	27.6	16.5	0.49	0.34	13.64	0.81	16.4	7.6	3.00	77	0.00	5.15	5.42	0.21	2787
F+10	35.9	20.2	0.53	0.36	16.42	0.84	19.0	12.1	3.12	95	0.00	7.05	7.55	0.19	3136
F+10	35.1	21.0	0.53	0.36	16.08	0.83	18.9	12.3	3.08	92	0.00	7.25	7.78	0.19	3093
Rill 2	slope = 4.0 %														
R+0	3.8	35.9	0.15	0.10	6.09	0.77	6.3	2.3	3.01	30	4.62	0.00	2.48	2.25	819
R+2	10.4	37.5	0.38	0.26	6.67	0.67	9.4	6.5	2.62	36	2.84	4.91	5.27	0.31	1796
R+2	11.2	35.7	0.38	0.26	7.13	0.71	9.4	6.6	2.78	39	2.84	5.02	5.61	0.33	1903
R+4	17.8	31.1	0.41	0.28	10.56	0.65	15.6	9.2	2.54	57	1.41	5.16	5.38	0.26	1880
R+4	17.9	31.6	0.41	0.28	10.57	0.65	15.6	9.4	2.54	57	1.41	5.28	5.48	0.26	1880
R+6	23.9	28.1	0.43	0.30	13.50	0.80	16.3	11.2	3.13	81	1.33	6.32	6.93	0.29	2426
R+6	22.0	28.2	0.43	0.30	12.43	0.75	16.3	10.3	2.94	74	1.33	5.74	6.26	0.27	2275
R+8	27.7	29.7	0.43	0.30	15.62	0.81	18.1	13.7	3.17	92	1.12	7.29	7.88	0.29	2457
R+8	32.1	30.6	0.43	0.30	18.11	0.92	18.1	16.4	3.60	112	1.12	8.90	9.66	0.33	2790
R+10	40.0	29.0	0.59	0.41	16.44	0.85	18.8	19.3	3.33	103	1.06	10.40	11.16	0.16	3537
R+10	39.0	25.3	0.59	0.41	16.05	0.80	18.8	16.4	3.13	94	1.06	8.69	9.29	0.15	3329

RILL DATA ANALYSIS　　SOIL: ACADEMY　　DATE: JUNE 30, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 4.0 %														
F+2	6.8	17.5	0.33	0.23	4.99	0.45	11.0	2.0	1.74	23	0.00	2.00	2.10	0.27	1036
F+2	6.7	17.8	0.33	0.23	4.89	0.44	10.9	2.0	1.71	22	0.00	2.01	2.11	0.27	1019
F+4	14.3	27.8	0.45	0.31	7.69	0.59	12.7	6.6	2.31	40	0.00	5.80	6.34	0.19	1877
F+4	14.5	27.7	0.45	0.31	7.81	0.43	17.8	6.7	1.69	35	0.00	4.18	4.63	0.14	1370
F+6	20.1	24.7	0.55	0.38	8.86	0.47	18.4	8.3	1.85	42	0.00	5.00	5.57	0.10	1833
F+6	20.3	24.2	0.55	0.38	8.97	0.48	18.4	8.2	1.87	42	0.00	4.94	5.49	0.10	1849
F+6	20.1	24.7	0.55	0.38	8.86	0.53	16.4	8.3	2.08	44	0.00	5.60	6.19	0.12	2063
F+6	20.3	24.2	0.55	0.38	8.97	0.54	16.4	8.2	2.10	45	0.00	5.54	6.11	0.12	2084
F+8	25.8	24.2	0.58	0.40	10.80	0.62	17.1	10.4	2.43	59	0.00	6.77	7.45	0.12	2543
F+8	26.4	23.7	0.58	0.40	11.06	0.63	17.2	10.4	2.48	60	0.00	6.77	7.43	0.13	2590
F+10	34.4	29.2	0.57	0.39	14.64	0.75	19.2	16.7	2.93	87	0.00	9.69	10.76	0.15	3006
F+10	39.6	25.9	0.57	0.39	16.86	0.84	19.6	17.1	3.29	106	0.00	9.70	10.58	0.17	3383
Rill 3	slope = 4.9 %														
R+0	3.2	26.2	0.22	0.15	3.58	0.50	6.3	1.4	2.40	21	4.62	0.00	1.08	0.86	767
R+2	10.4	35.0	0.38	0.26	6.65	0.59	10.6	6.1	2.83	46	2.42	3.93	4.38	0.33	1581
R+2	11.1	32.2	0.38	0.26	7.08	0.62	10.6	5.9	2.97	49	2.42	3.79	4.39	0.35	1662
R+4	18.3	29.8	0.43	0.30	10.31	0.67	15.0	9.1	3.21	78	1.50	5.23	5.60	0.30	2032
R+4	17.8	29.6	0.43	0.30	10.04	0.64	15.0	8.8	3.07	73	1.50	5.00	5.33	0.28	1941
R+6	23.7	29.0	0.50	0.34	11.51	0.70	15.6	11.5	3.36	87	1.41	6.75	7.02	0.23	2469
R+6	23.1	30.8	0.50	0.34	11.21	0.69	15.6	11.9	3.31	85	1.41	7.03	7.25	0.22	2433
R+8	29.0	33.4	0.54	0.37	13.03	0.77	16.3	16.2	3.69	104	1.33	9.72	9.96	0.22	2933
R+8	31.3	34.5	0.54	0.37	14.07	0.83	16.3	18.0	3.98	117	1.33	10.99	11.31	0.23	3161
R+10	40.0	17.5	0.58	0.40	16.74	0.95	16.9	11.7	4.56	148	1.25	6.44	7.04	0.23	3886
R+10	39.3	17.4	0.58	0.40	16.44	0.94	16.9	11.4	4.51	146	1.25	6.26	6.86	0.23	3846
Rill 3 was "somewhat plugged" for R+10.															
F+2	6.5	68.2	0.32	0.22	4.93	0.66	6.6	7.4	3.18	34	0.00	12.37	13.95	0.53	1497
F+2	6.7	34.5	0.32	0.22	5.11	0.68	6.7	3.9	3.26	36	0.00	6.44	6.82	0.54	1536
F+4	14.6	41.8	0.41	0.28	8.61	0.57	14.7	10.1	2.73	60	0.00	7.65	8.37	0.28	1648
F+4	14.7	40.9	0.41	0.28	8.67	0.57	14.7	10.0	2.75	61	0.00	7.52	8.22	0.28	1657
F+6	19.6	36.4	0.50	0.34	9.49	0.62	15.0	11.9	2.95	69	0.00	8.80	9.67	0.20	2173
F+6	19.9	29.0	0.50	0.34	9.65	0.62	15.0	9.6	2.99	70	0.00	7.10	7.63	0.20	2202
F+6	19.6	36.4	0.50	0.34	9.49	0.82	10.0	11.9	3.94	71	0.00	13.20	14.46	0.27	2898
F+6	19.9	29.0	0.50	0.34	9.65	0.83	10.0	9.6	3.99	72	0.00	10.66	11.44	0.27	2937
F+8	25.4	30.4	0.56	0.38	10.99	0.92	10.2	12.9	4.42	85	0.00	14.03	15.21	0.24	3638
F+8	26.8	27.0	0.56	0.38	11.63	0.96	10.3	12.1	4.60	92	0.00	13.02	13.95	0.25	3791
F+10	35.7	31.1	0.58	0.40	14.94	1.15	10.9	18.5	5.49	127	0.00	18.91	20.45	0.28	4687
F+10	35.2	28.4	0.58	0.40	14.73	1.13	10.8	16.7	5.44	124	0.00	17.07	18.33	0.27	4641

RILL DATA ANALYSIS SOIL: ACADEMY DATE: JUNE 30, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 4.6 %														
R+0	3.4	24.9	0.12	0.08	6.99	0.85	6.3	1.4	3.83	42	4.62	0.00	0.00	4.73	703
R+2	10.2	19.9	0.24	0.16	10.27	0.87	10.6	3.4	3.92	74	2.42	1.11	1.11	1.16	1473
R+2	10.8	19.1	0.24	0.16	10.89	0.91	10.6	3.4	4.10	80	2.42	1.16	1.16	1.21	1540
R+4	18.2	17.9	0.33	0.23	13.35	0.80	15.6	5.4	3.60	96	1.41	2.44	2.44	0.56	1862
R+4	16.9	17.8	0.33	0.23	12.39	0.76	15.6	5.0	3.42	89	1.41	2.15	2.15	0.53	1769
R+6	24.3	20.3	0.41	0.28	14.39	0.82	16.3	8.2	3.69	104	1.33	4.29	4.29	0.37	2371
R+6	23.4	21.1	0.41	0.28	13.82	0.79	16.3	8.2	3.56	98	1.33	4.28	4.28	0.36	2285
R+8	29.6	22.8	0.46	0.32	15.62	0.82	18.8	11.3	3.69	120	1.06	5.62	5.62	0.30	2661
R+8	31.6	23.8	0.46	0.32	16.65	0.86	18.8	12.5	3.87	129	1.06	6.38	6.38	0.31	2790
R+10	41.7	25.9	0.58	0.40	17.46	0.83	20.0	18.0	3.74	130	0.95	9.05	9.05	0.19	3396
R+10	40.1	40.9	0.58	0.40	16.76	0.80	20.0	27.3	3.60	123	0.95	14.22	14.22	0.18	3273
F+2	4.6	26.1	0.32	0.22	3.50	0.50	6.6	2.0	2.24	20	0.00	3.37	3.55	0.37	1124
F+2	5.7	20.2	0.32	0.22	4.35	0.36	11.6	1.9	1.63	22	0.00	1.85	1.93	0.27	817
F+4	13.5	27.0	0.44	0.30	7.45	0.50	14.2	6.1	2.26	44	0.00	4.75	5.11	0.20	1559
F+4	13.6	28.3	0.44	0.30	7.52	0.51	14.2	6.4	2.28	44	0.00	5.01	5.41	0.20	1572
F+6	20.6	29.3	0.50	0.34	10.00	0.59	14.9	10.1	2.65	58	0.00	7.53	8.27	0.18	2073
F+6	20.4	27.9	0.50	0.34	9.90	0.58	14.9	9.5	2.62	57	0.00	7.09	7.76	0.18	2054
F+6	20.6	29.3	0.50	0.34	10.00	0.68	13.6	10.1	3.07	66	0.00	8.23	8.93	0.21	2405
F+6	20.4	27.9	0.50	0.34	9.90	0.68	13.5	9.5	3.05	65	0.00	7.78	8.40	0.21	2389
F+8	25.3	32.8	0.51	0.35	12.02	0.80	14.2	13.8	3.61	88	0.00	10.83	11.78	0.24	2882
F+8	26.6	26.2	0.51	0.35	12.64	0.70	16.7	11.6	3.14	84	0.00	7.73	8.32	0.21	2512
F+10	36.5	27.3	0.51	0.35	17.36	0.92	17.0	16.6	4.16	131	0.00	10.82	11.57	0.27	3324
F+10	33.5	34.1	0.51	0.35	15.95	0.86	16.9	19.1	3.86	116	0.00	12.50	13.65	0.25	3088
Rill 5	slope = 5.1 %														
R+0	3.4	51.4	0.22	0.15	3.69	0.47	7.5	2.9	2.35	24	3.73	0.55	0.86	0.81	737
R+2	9.9	51.4	0.36	0.25	6.67	0.68	9.4	8.5	3.39	53	2.84	7.19	8.00	0.44	1727
R+2	10.3	53.4	0.36	0.25	6.97	0.70	9.4	9.2	3.49	55	2.84	8.07	8.92	0.46	1777
R+4	17.1	46.1	0.40	0.27	10.35	0.71	13.8	13.1	3.54	83	1.71	8.89	9.66	0.38	2003
R+4	16.9	41.9	0.40	0.27	10.25	0.71	13.8	11.8	3.54	83	1.71	7.83	8.62	0.38	2003
R+6	22.7	47.7	0.45	0.31	12.24	0.78	15.0	18.0	3.89	104	1.50	11.86	12.91	0.33	2476
R+6	21.6	36.6	0.45	0.31	11.67	0.74	15.0	13.2	3.69	96	1.50	8.28	9.14	0.31	2349
R+8	29.3	42.0	0.45	0.31	15.77	0.95	15.6	20.5	4.74	146	1.41	13.16	14.49	0.40	3015
R+8	22.2	40.0	0.45	0.31	11.96	0.74	15.6	14.8	3.69	100	1.41	9.09	9.93	0.31	2349
R+10	36.4	59.4	0.48	0.33	18.37	0.83	21.9	36.0	4.14	167	0.80	17.47	19.32	0.31	2810
R+10	38.8	49.4	0.48	0.33	19.59	0.88	21.9	31.9	4.39	182	0.80	15.40	16.86	0.32	2979

RILL DATA ANALYSIS SOIL: ACADEMY DATE: JUNE 30, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 5	slope = 5.1 %														
F+2	6.5	41.7	0.29	0.20	5.44	0.77	6.2	4.5	3.85	42	0.00	8.14	8.61	0.78	1578
F+2	6.3	25.8	0.29	0.20	5.31	0.76	6.1	2.7	3.79	41	0.00	4.95	5.12	0.77	1552
F+4	14.1	28.6	0.38	0.26	8.99	1.06	7.1	6.7	5.28	78	0.00	10.54	11.03	0.62	2837
F+4	14.1	30.0	0.38	0.26	8.97	1.06	7.1	7.0	5.28	77	0.00	11.05	11.58	0.62	2833
F+6	19.4	43.5	0.44	0.30	10.70	1.17	7.5	14.1	5.85	96	0.00	20.82	22.52	0.51	3636
F+6	19.3	43.7	0.44	0.30	10.62	1.17	7.5	14.0	5.82	95	0.00	20.83	22.53	0.51	3620
F+6	19.4	43.5	0.44	0.30	10.70	1.03	7.1	14.1	5.16	75	0.00	22.08	24.45	0.45	3206
F+6	19.3	43.7	0.44	0.30	10.62	1.03	7.1	14.0	5.13	74	0.00	22.05	24.44	0.45	3190
F+8	25.2	43.9	0.48	0.33	12.73	1.16	7.3	18.4	5.80	92	0.00	28.20	31.48	0.43	3936
F+8	25.3	44.6	0.48	0.33	12.77	1.16	7.3	18.8	5.81	92	0.00	28.80	32.22	0.43	3944
F+10	32.4	48.3	0.44	0.30	17.87	1.44	7.7	26.1	7.20	134	0.00	37.75	41.99	0.63	4474
F+10	32.4	45.0	0.44	0.30	17.84	1.44	7.7	24.2	7.19	134	0.00	35.08	38.70	0.63	4470
Rill 6	slope = 4.6 %														
R+0	3.4	49.6	0.23	0.16	3.60	0.37	9.4	2.8	1.67	18	2.84	0.49	1.67	0.54	598
R+2	10.1	61.6	0.38	0.26	6.46	0.57	10.6	10.4	2.57	39	2.42	8.44	9.75	0.30	1528
R+2	10.4	55.5	0.38	0.26	6.65	0.59	10.6	9.6	2.66	42	2.42	7.66	9.06	0.31	1581
R+4	17.1	55.1	0.40	0.27	10.37	0.84	11.9	15.7	3.78	79	2.09	12.61	14.61	0.40	2370
R+4	16.8	55.8	0.40	0.27	10.17	0.83	11.9	15.6	3.74	77	2.09	12.49	14.48	0.40	2342
R+6	21.2	60.7	0.45	0.31	11.41	0.69	15.6	21.4	3.11	77	1.41	13.79	15.89	0.26	2190
R+6	21.6	75.9	0.45	0.31	11.64	0.74	15.6	27.3	3.33	86	1.41	17.98	21.03	0.28	2349
R+8	27.3	65.0	0.45	0.31	14.69	0.83	16.9	29.5	3.74	110	1.25	18.19	21.00	0.31	2634
R+8	27.7	61.1	0.45	0.31	14.96	0.84	16.9	28.3	3.78	112	1.25	17.35	19.92	0.32	2666
R+10	33.6	56.9	0.48	0.33	16.98	0.86	18.8	31.9	3.87	129	1.06	17.83	20.43	0.29	2912
R+10	36.1	57.7	0.48	0.33	18.25	0.92	18.8	34.7	4.14	143	1.06	19.51	22.33	0.31	3115
F+2	6.2	25.0	0.28	0.19	5.35	0.44	11.3	2.6	2.00	29	0.00	2.53	0.00	0.43	876
F+2	6.7	19.7	0.28	0.19	5.82	0.48	11.4	2.2	2.15	32	0.00	2.15	0.00	0.47	943
F+4	14.1	30.5	0.34	0.23	10.04	0.76	12.2	7.1	3.41	69	0.00	6.50	6.86	0.50	1814
F+4	13.4	37.3	0.34	0.23	9.56	0.73	12.1	8.3	3.27	65	0.00	7.63	8.17	0.48	1743
F+6	18.3	43.5	0.38	0.26	11.66	0.85	12.5	13.2	3.84	85	0.00	11.75	12.77	0.45	2286
F+6	18.2	44.0	0.38	0.26	11.65	0.85	12.5	13.4	3.84	85	0.00	11.88	12.92	0.45	2284
F+6	18.3	43.5	0.38	0.26	11.66	0.90	11.7	13.2	4.06	87	0.00	12.53	13.59	0.48	2416
F+6	18.2	44.0	0.38	0.26	11.65	0.90	11.7	13.4	4.05	87	0.00	12.66	13.76	0.48	2414
F+8	23.2	52.5	0.43	0.30	13.07	0.99	11.9	20.3	4.44	101	0.00	18.89	21.09	0.41	2992
F+8	24.6	52.0	0.43	0.30	13.90	1.03	12.0	21.3	4.66	109	0.00	19.74	21.97	0.43	3139
F+10	33.0	57.6	0.45	0.31	17.80	1.24	12.6	31.7	5.59	150	0.00	28.00	31.46	0.47	3938
F+10	34.6	55.7	0.45	0.31	18.65	1.28	12.7	32.1	5.77	159	0.00	28.08	31.36	0.48	4070

RILL DATA ANALYSIS SOIL: LOS BANOS DATE: JULY 1, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 89.74 Kinematic Viscosity = 0.916×10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 40.77 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.3 %														
R+0	3.14	20.69	0.08	0.06	9.08	0.92	6.3	1.1	3.87	43	4.32	0.00	0.00	9.32	580
R+2	7.46	13.86	0.18	0.12	10.23	1.07	8.1	1.7	4.50	70	3.17	0.00	0.00	2.45	1419
R+2	8.17	13.28	0.18	0.12	11.21	1.13	8.1	1.8	4.76	76	3.17	0.00	0.00	2.58	1499
R+4	14.42	9.86	0.24	0.16	14.57	1.13	11.3	2.4	4.76	105	2.10	0.24	0.24	1.40	2034
R+4	11.70	8.59	0.24	0.16	11.83	0.97	11.3	1.7	4.08	83	2.10	0.00	0.00	1.20	1746
R+6	18.16	14.13	0.29	0.20	15.42	0.93	16.3	4.3	3.91	113	1.24	1.68	1.68	0.81	1993
R+6	18.46	10.88	0.29	0.20	15.67	0.95	16.3	3.3	4.00	117	1.24	1.05	1.05	0.83	2036
R+8	24.25	9.30	0.32	0.22	18.41	1.07	16.9	3.8	4.50	145	1.17	1.30	1.30	0.75	2565
R+8	24.60	15.17	0.32	0.22	18.67	1.08	16.9	6.2	4.54	147	1.17	2.92	2.92	0.76	2589
R+10	29.80	9.33	0.39	0.27	18.72	0.98	18.8	4.6	4.12	141	0.99	1.76	1.76	0.47	2838
R+10	30.59	10.05	0.39	0.27	19.22	0.99	18.8	5.1	4.17	143	0.99	2.05	2.05	0.47	2867
F+2	6.26	0.32	0.18	0.12	8.57	0.87	8.5	0.0	3.66	53	0.00	0.04	0.04	1.98	1156
F+2	6.90	0.24	0.18	0.12	9.44	0.94	8.6	0.0	3.94	60	0.00	0.04	0.04	2.13	1245
F+4	12.47	1.25	0.26	0.18	11.72	1.10	8.9	0.3	4.62	79	0.00	0.33	0.33	1.18	2127
F+4	12.37	0.67	0.26	0.18	11.62	1.09	8.8	0.1	4.59	78	0.00	0.17	0.17	1.17	2114
F+6	16.46	2.13	0.30	0.20	13.39	1.21	9.0	0.6	5.08	93	0.00	0.72	0.72	0.97	2702
F+6	16.73	1.68	0.30	0.20	13.61	1.22	9.1	0.5	5.14	95	0.00	0.57	0.58	0.98	2733
F+6	16.46	2.13	0.30	0.20	13.39	0.89	13.9	0.6	3.74	90	0.00	0.47	0.47	0.71	1987
F+6	16.73	1.68	0.30	0.20	13.61	0.90	14.0	0.5	3.77	92	0.00	0.37	0.37	0.72	2006
F+8	21.88	2.73	0.29	0.20	18.46	1.13	14.9	1.0	4.76	138	0.00	0.75	0.75	0.98	2437
F+8	22.36	2.71	0.29	0.20	18.87	1.15	14.9	1.0	4.84	142	0.00	0.75	0.76	0.99	2479
F+10	27.84	12.77	0.37	0.25	18.46	1.13	14.9	5.9	4.76	138	0.00	4.43	4.53	0.60	3101
F+10	29.11	7.31	0.37	0.25	19.30	1.17	15.0	3.5	4.92	147	0.00	2.63	2.67	0.62	3210
Rill 2	slope = 4.2 %														
R+0	2.32	13.59	0.07	0.05	8.44	1.01	6.3	0.5	4.15	47	4.32	0.00	0.03	15.86	505
R+2	4.96	10.38	0.15	0.10	8.13	0.94	8.1	0.9	3.86	55	3.17	0.00	0.00	3.00	1043
R+2	6.35	7.71	0.15	0.10	10.42	1.11	8.1	0.8	4.56	71	3.17	0.00	0.18	3.54	1231
R+4	10.04	7.91	0.18	0.13	13.26	1.00	12.5	1.3	4.11	93	1.82	0.00	0.07	2.07	1378
R+4	11.47	15.13	0.18	0.13	15.14	1.11	12.5	2.9	4.56	109	1.82	0.75	0.65	2.30	1529
R+6	16.92	21.35	0.21	0.14	19.59	1.23	13.8	6.0	5.06	140	1.59	3.27	2.07	1.96	1933
R+6	17.62	4.57	0.21	0.14	20.40	1.28	13.8	1.3	5.26	149	1.59	0.00	0.51	2.04	2012
R+8	22.96	8.86	0.23	0.16	23.73	1.44	14.4	3.4	5.92	186	1.50	1.13	1.55	1.83	2534
R+8	24.16	5.63	0.23	0.16	24.98	1.49	14.4	2.3	6.12	195	1.50	0.26	1.08	1.89	2622
R+10	30.54	9.32	0.28	0.19	26.51	1.48	16.9	4.7	6.08	227	1.17	1.95	2.09	1.32	3102
R+10	29.14	21.90	0.28	0.19	25.29	1.44	16.9	10.6	5.92	218	1.17	5.83	4.58	1.29	3018

RILL DATA ANALYSIS SOIL: LOS BANOS DATE: JULY 1, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 4.2 %														
F+2	5.66	0.50	0.17	0.12	7.95	0.69	10.8	0.0	2.82	46	0.00	0.05	0.00	1.61	889
F+2	5.89	0.41	0.17	0.12	8.27	0.71	10.9	0.0	2.91	48	0.00	0.04	0.00	1.66	917
F+4	11.15	5.34	0.23	0.16	11.56	0.89	11.9	1.0	3.67	75	0.00	0.92	0.93	1.14	1568
F+4	12.13	1.92	0.23	0.16	12.57	0.93	12.5	0.4	3.83	84	0.00	0.34	0.35	1.19	1634
F+6	15.13	6.52	0.26	0.18	14.24	0.94	14.0	1.6	3.88	96	0.00	1.31	1.32	0.99	1825
F+6	16.14	3.60	0.26	0.18	15.20	0.99	14.2	1.0	4.08	105	0.00	0.76	0.76	1.04	1916
F+6	15.13	6.52	0.26	0.18	14.24	0.79	16.6	1.6	3.24	87	0.00	1.10	1.11	0.83	1522
F+6	16.14	3.60	0.26	0.18	15.20	0.83	16.8	1.0	3.41	95	0.00	0.64	0.64	0.87	1604
F+8	21.71	1.93	0.27	0.19	19.23	1.01	17.3	0.7	4.14	131	0.00	0.45	0.45	0.94	2070
F+8	20.98	4.68	0.27	0.19	18.58	0.98	17.3	1.6	4.02	125	0.00	1.05	1.06	0.91	2010
F+10	24.85	25.97	0.30	0.20	20.28	1.05	17.4	10.8	4.34	141	0.00	6.85	7.13	0.83	2352
F+10	29.06	9.24	0.30	0.20	23.71	1.20	17.7	4.5	4.94	175	0.00	2.81	2.84	0.95	2682
Rill 3	slope = 4.1 %														
R+2	3.12	19.48	0.12	0.15	3.55	0.46	6.3	1.0	1.85	14	4.32	0.00	0.00	0.69	735
R+2	4.45	20.92	0.12	0.16	4.56	0.56	6.3	1.6	2.25	19	4.32	0.00	0.00	0.68	994
R+4	9.10	11.88	0.21	0.15	10.37	0.95	9.4	1.8	3.81	63	2.65	0.00	1.17	1.43	1517
R+4	11.76	13.26	0.21	0.15	13.40	1.13	9.4	2.6	4.53	81	2.65	0.43	1.99	1.70	1804
R+6	16.49	6.34	0.24	0.16	16.90	1.16	12.5	1.7	4.65	113	1.82	0.00	1.14	1.41	2058
R+6	16.87	8.01	0.24	0.16	17.30	1.18	12.5	2.3	4.73	116	1.82	0.18	1.49	1.44	2094
R+8	22.28	7.29	0.29	0.20	18.52	1.18	15.6	2.7	4.73	145	1.32	0.60	1.54	0.94	2583
R+8	23.91	22.71	0.29	0.20	19.87	1.24	15.6	9.0	4.98	156	1.32	5.11	5.34	0.99	2714
R+10	27.49	80.39	0.34	0.24	19.42	1.22	15.6	36.8	4.90	152	1.32	24.86	23.48	0.71	3143
R+10	30.30	10.04	0.34	0.24	21.40	1.31	15.6	5.1	5.26	169	1.32	2.28	3.01	0.76	3374
F+2	5.05	2.04	0.19	0.13	6.60	0.63	10.0	0.2	2.54	36	0.00	0.19	0.19	1.25	880
F+2	6.14	1.60	0.19	0.13	8.03	0.70	11.0	0.2	2.79	46	0.00	0.17	0.17	1.38	968
F+4	11.31	14.63	0.29	0.20	9.33	0.78	11.4	2.8	3.12	57	0.00	2.68	2.75	0.61	1715
F+4	11.87	29.79	0.29	0.20	9.79	0.81	11.6	5.9	3.23	60	0.00	5.67	5.96	0.63	1777
F+6	15.64	2.21	0.30	0.21	12.69	0.97	12.4	0.6	3.89	85	0.00	0.52	0.52	0.74	2174
F+6	17.07	6.17	0.30	0.21	13.85	1.03	12.7	1.8	4.13	95	0.00	1.54	1.55	0.78	2309
F+6	15.64	2.21	0.30	0.21	12.69	0.90	13.3	0.6	3.62	82	0.00	0.48	0.48	0.69	2021
F+6	17.07	6.17	0.30	0.21	13.85	0.96	13.5	1.8	3.87	92	0.00	1.45	1.46	0.73	2162
F+8	21.45	3.36	0.33	0.22	15.91	1.07	13.9	1.2	4.29	111	0.00	0.96	0.97	0.68	2626
F+8	20.97	4.79	0.33	0.22	15.55	1.05	13.8	1.7	4.22	108	0.00	1.35	1.36	0.67	2582
F+10	23.77	25.29	0.34	0.24	16.74	1.11	14.0	10.0	4.46	119	0.00	7.93	8.29	0.64	2873
F+10	28.51	7.58	0.34	0.24	20.07	1.27	14.6	3.6	5.09	151	0.00	2.74	2.77	0.73	3278

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 3.9 %														
R+2	2.67	18.12	0.13	0.09	4.92	0.48	9.4	0.8	1.83	21	2.65	0.00	0.00	1.79	474
R+2	3.63	14.22	0.13	0.09	6.68	0.61	9.4	0.9	2.33	30	2.65	0.00	0.01	2.28	603
R+4	7.43	12.04	0.22	0.15	8.09	0.71	10.0	1.5	2.71	40	2.45	0.00	0.08	0.93	1186
R+4	9.54	6.47	0.22	0.15	10.39	0.85	10.0	1.0	3.24	52	2.45	0.00	0.11	1.11	1420
R+6	16.40	5.85	0.25	0.17	15.91	1.09	12.5	1.6	4.16	95	1.82	0.00	0.29	1.13	2045
R+6	17.30	7.25	0.25	0.17	16.79	1.13	12.5	2.1	4.31	100	1.82	0.04	0.41	1.17	2120
R+8	22.37	7.19	0.32	0.22	17.22	1.05	15.6	2.7	4.01	113	1.32	0.58	0.47	0.69	2482
R+8	23.92	4.97	0.32	0.22	18.41	1.11	15.6	2.0	4.24	122	1.32	0.09	0.38	0.72	2623
R+10	31.10	6.74	0.34	0.24	21.93	1.09	18.8	3.5	4.16	143	0.99	1.08	0.67	0.60	2813
R+10	30.22	7.65	0.34	0.24	21.31	1.07	18.8	3.9	4.08	139	0.99	1.29	0.72	0.59	2761
F+2	5.96	0.27	0.16	0.11	9.01	0.57	14.0	0.0	2.19	41	0.00	0.02	0.00	1.44	692
F+2	5.89	0.22	0.16	0.11	8.89	0.57	14.0	0.0	2.17	40	0.00	0.02	0.00	1.43	684
F+4	11.80	0.87	0.27	0.18	10.73	0.67	14.2	0.2	2.55	52	0.00	0.13	0.13	0.61	1339
F+4	12.67	0.56	0.27	0.18	11.51	0.71	14.3	0.1	2.71	57	0.00	0.09	0.09	0.65	1423
F+6	17.14	1.89	0.30	0.21	13.84	0.83	14.6	0.5	3.18	74	0.00	0.41	0.41	0.60	1877
F+6	18.05	1.41	0.30	0.21	14.57	0.87	14.7	0.4	3.32	80	0.00	0.32	0.32	0.63	1962
F+6	17.14	1.89	0.30	0.21	13.84	0.75	17.4	0.5	2.85	75	0.00	0.34	0.35	0.54	1681
F+6	18.05	1.41	0.30	0.21	14.57	0.78	17.6	0.4	2.97	81	0.00	0.27	0.27	0.56	1753
F+8	22.01	5.04	0.34	0.23	15.69	0.83	17.8	1.8	3.15	90	0.00	1.15	1.16	0.46	2109
F+8	23.04	2.73	0.34	0.23	16.42	0.86	18.0	1.0	3.27	95	0.00	0.65	0.65	0.48	2188
F+10	25.34	15.03	0.36	0.25	17.08	0.88	18.1	6.3	3.38	101	0.00	3.90	4.03	0.44	2388
F+10	29.69	5.35	0.36	0.25	20.01	1.01	18.6	2.6	3.84	125	0.00	1.58	1.60	0.50	2716
Rill 5	slope = 3.6 %														
R+2	2.07	40.52	0.11	0.08	4.44	1.20	11.9	1.4	4.23	93	1.95	0.00	0.00	5.63	1017
R+2	3.72	31.01	0.11	0.08	8.00	1.66	11.9	1.9	5.85	151	1.95	0.00	0.00	7.78	1407
R+4	9.70	18.74	0.21	0.15	11.07	1.15	14.4	3.0	4.05	105	1.50	0.85	0.85	1.53	1833
R+4	14.08	11.45	0.21	0.15	16.08	1.37	14.4	2.7	4.83	137	1.50	0.58	0.58	1.82	2183
R+6	16.78	8.56	0.26	0.18	15.72	1.69	13.8	2.4	5.95	179	1.59	0.34	0.34	1.51	3281
R+6	16.09	8.66	0.26	0.18	15.08	1.22	13.8	2.3	4.30	110	1.59	0.28	0.28	1.09	2368
R+8	22.55	9.71	0.32	0.22	17.24	1.49	14.4	3.6	5.25	155	1.50	1.33	1.33	0.89	3546
R+8	23.53	7.23	0.32	0.22	17.99	1.61	14.4	2.8	5.67	174	1.50	0.70	0.70	0.96	3831
R+10	27.01	8.07	0.33	0.22	20.11	1.06	18.8	3.6	3.73	121	0.99	1.17	1.17	0.60	2590
R+10	26.81	5.58	0.33	0.22	19.97	1.06	18.8	2.5	3.73	121	0.99	0.49	0.49	0.60	2590

RILL DATA ANALYSIS SOIL: LOS BANOS DATE: JULY 1, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 3.6 %														
F+2	4.87	0.30	0.17	0.12	6.79	0.68	9.2	0.0	2.41	31	0.00	0.03	0.00	1.35	894
F+2	5.70	0.20	0.17	0.12	7.94	0.77	9.6	0.0	2.70	38	0.00	0.02	0.00	1.51	1000
F+4	11.13	1.00	0.24	0.17	11.13	0.73	10.7	0.2	2.56	39	0.00	0.19	0.00	0.74	1320
F+4	12.22	0.52	0.24	0.17	12.22	0.78	10.8	0.1	2.76	44	0.00	0.11	0.11	0.80	1427
F+6	9.96	1.42	0.29	0.20	8.47	0.80	9.7	0.2	2.82	41	0.00	0.27	0.27	0.59	1711
F+6	15.75	2.11	0.29	0.20	13.40	0.85	10.9	0.6	2.98	50	0.00	0.57	0.57	0.62	1810
F+6	9.96	1.42	0.29	0.20	8.47	0.92	6.5	0.2	3.23	34	0.00	0.40	0.40	0.67	1958
F+6	15.75	2.11	0.29	0.20	13.40	1.25	6.8	0.6	4.39	56	0.00	0.90	0.91	0.92	2664
F+8	21.18	1.94	0.32	0.22	15.84	1.38	7.0	0.7	4.86	67	0.00	1.09	1.10	0.78	3357
F+8	21.00	1.84	0.32	0.22	15.70	1.37	7.0	0.6	4.83	66	0.00	1.03	1.04	0.78	3340
F+10	22.59	5.77	0.34	0.24	15.99	1.39	7.0	2.2	4.89	68	0.00	3.46	3.52	0.71	3567
F+10	28.43	7.75	0.34	0.24	20.12	1.58	7.2	3.7	5.57	85	0.00	5.66	5.78	0.81	4069
Rill 6	slope = 4.0 %														
R+2	6.43	10.26	0.18	0.12	8.63	0.69	12.5	1.1	2.70	50	1.82	0.00	0.26	1.40	936
R+2	6.73	10.82	0.18	0.12	9.02	0.71	12.5	1.2	2.78	52	1.82	0.00	0.30	1.44	963
R+4	13.34	8.05	0.19	0.13	17.05	1.37	11.3	1.8	5.36	125	2.10	0.00	0.64	2.53	1951
R+4	11.71	6.23	0.19	0.13	14.96	1.25	11.3	1.2	4.89	109	2.10	0.00	0.41	2.31	1780
R+6	17.81	10.51	0.30	0.21	14.40	1.04	12.5	3.1	4.07	92	1.82	0.95	0.94	0.77	2340
R+6	18.56	10.39	0.30	0.21	15.01	1.08	12.5	3.2	4.23	98	1.82	1.04	0.99	0.80	2430
R+8	24.18	9.80	0.36	0.25	16.30	0.86	18.8	4.0	3.37	104	0.99	1.35	1.05	0.44	2322
R+8	25.58	8.73	0.36	0.25	17.24	0.90	18.8	3.7	3.52	111	0.99	1.22	1.01	0.46	2430
R+10	31.31	10.81	0.41	0.28	18.53	1.12	16.9	5.6	4.38	139	1.17	2.54	1.72	0.44	3444
R+10	31.30	11.26	0.41	0.28	18.52	1.12	16.9	5.9	4.38	139	1.17	2.69	1.79	0.44	3444
F+2	5.55	0.79	0.19	0.13	7.08	0.83	7.8	0.1	3.27	42	0.00	0.10	0.10	1.54	1189
F+2	5.85	0.53	0.19	0.13	7.47	0.86	8.0	0.1	3.37	44	0.00	0.07	0.07	1.59	1228
F+4	12.13	1.51	0.31	0.21	9.49	0.89	9.9	0.3	3.47	57	0.00	0.34	0.35	0.61	2060
F+4	12.89	1.05	0.31	0.21	10.08	0.92	10.1	0.2	3.61	62	0.00	0.25	0.25	0.64	2144
F+6	13.45	3.48	0.31	0.21	10.53	0.95	10.2	0.8	3.72	66	0.00	0.85	0.86	0.66	2207
F+6	15.44	2.92	0.31	0.21	12.09	1.04	10.7	0.8	4.06	78	0.00	0.78	0.79	0.72	2414
F+6	13.45	3.48	0.31	0.21	10.53	0.79	10.9	0.8	3.10	53	0.00	0.79	0.80	0.55	1839
F+6	15.44	2.92	0.31	0.21	12.09	0.82	12.2	0.8	3.22	63	0.00	0.68	0.69	0.57	1912
F+8	21.86	3.69	0.33	0.23	16.07	1.00	13.4	1.3	3.93	94	0.00	1.12	1.12	0.61	2486
F+8	21.83	3.33	0.33	0.23	16.05	1.00	13.4	1.2	3.93	93	0.00	1.01	1.01	0.61	2484
F+10	19.23	10.30	0.36	0.25	12.96	0.86	12.5	3.3	3.38	70	0.00	2.93	3.01	0.44	2334
F+10	29.17	6.60	0.36	0.25	19.66	1.14	14.6	3.2	4.45	122	0.00	2.45	2.48	0.58	3068

RILL DATA ANALYSIS SOIL: PORTNEUF DATE: JULY 6, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 78.45 Kinematic Viscosity = 1.007 x 10^{-6} m^2/s

Velocity Factor = 0.687 D_i = 16.03 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 5.93 %														
R+0	2.6	16.0	0.14	0.10	4.5	0.51	9.4	0.7	2.96	37	1.04	0.00	0.00	2.50	493
R+2	8.1	41.8	0.30	0.21	6.6	0.68	9.4	5.7	3.95	58	1.04	5.66	5.66	0.75	1392
R+2	9.2	43.5	0.30	0.21	7.4	0.75	9.4	6.7	4.35	67	1.04	6.85	7.38	0.82	1535
R+4	17.9	62.8	0.40	0.27	10.8	1.00	10.3	18.7	5.80	113	0.92	19.21	21.18	0.62	2729
R+4	16.4	73.3	0.40	0.27	9.9	0.94	10.3	20.0	5.46	103	0.92	20.66	22.92	0.58	2565
R+6	21.7	68.5	0.39	0.27	13.5	1.11	11.3	24.7	6.44	144	0.83	23.62	26.11	0.72	2953
R+6	23.1	75.2	0.39	0.27	14.4	1.16	11.3	29.0	6.73	154	0.83	27.82	30.97	0.75	3086
R+8	28.8	76.2	0.41	0.28	17.1	1.28	12.2	36.6	7.43	194	0.74	32.64	36.35	0.75	3580
R+8	29.5	100.0	0.41	0.28	17.5	1.30	12.2	49.2	7.54	198	0.74	44.10	50.61	0.76	3636
R+10	38.8	113.4	0.44	0.30	21.4	1.50	13.1	73.3	8.70	265	0.67	61.35	71.69	0.76	4503
R+10	39.6	103.3	0.44	0.30	21.8	1.52	13.1	68.2	8.82	270	0.67	57.03	65.69	0.77	4563
F+2	4.6	19.9	0.16	0.11	7.0	0.70	9.3	1.5	4.09	60	0.00	1.85	0.00	2.71	769
F+2	4.8	20.4	0.16	0.11	7.2	0.72	9.4	1.6	4.16	62	0.00	1.92	0.00	2.76	783
F+4	13.5	52.1	0.27	0.19	12.1	0.99	11.3	11.7	5.74	122	0.00	11.57	12.17	1.34	1822
F+4	13.3	51.4	0.27	0.19	11.9	0.98	11.2	11.4	5.66	119	0.00	11.23	11.81	1.32	1798
F+6	19.3	61.3	0.35	0.24	13.4	1.06	11.5	19.7	6.17	138	0.00	19.04	20.54	0.86	2538
F+6	19.6	68.1	0.35	0.24	13.6	1.07	11.5	22.2	6.23	141	0.00	21.37	23.26	0.86	2562
F+6	19.3	61.3	0.35	0.24	13.4	1.25	6.9	19.7	7.26	106	0.00	31.64	35.00	1.01	2987
F+6	19.6	68.1	0.35	0.24	13.6	1.26	6.9	22.2	7.32	108	0.00	35.54	39.79	1.01	3011
F+8	25.0	84.8	0.41	0.28	14.8	1.33	7.1	35.3	7.70	119	0.00	55.52	65.91	0.78	3714
F+8	28.9	67.6	0.41	0.28	17.1	1.45	7.3	32.6	8.40	139	0.00	49.62	56.52	0.85	4049
F+10	36.5	78.5	0.50	0.34	17.7	1.48	7.3	47.7	8.56	144	0.00	72.19	87.63	0.58	5034
F+10	39.4	87.9	0.50	0.34	19.1	1.54	7.5	57.6	8.94	157	0.00	85.64	106.75	0.61	5256
Rill 2	slope = 5.61 %														
R+0	3.2	47.6	0.14	0.10	5.6	0.66	8.4	2.6	3.62	46	1.19	2.18	0.00	3.14	630
R+2	9.5	42.3	0.33	0.23	7.0	0.82	8.4	6.7	4.50	63	1.19	7.60	7.60	0.70	1846
R+2	9.6	54.0	0.33	0.23	7.0	0.83	8.4	8.6	4.56	64	1.19	10.16	10.16	0.71	1869
R+4	18.1	66.6	0.39	0.27	11.2	1.05	10.3	20.1	5.76	112	0.92	20.69	22.96	0.64	2794
R+4	18.8	64.2	0.39	0.27	11.7	1.08	10.3	20.1	5.93	117	0.92	20.76	23.03	0.66	2874
R+6	23.2	84.0	0.38	0.26	14.8	1.22	11.3	32.4	6.70	153	0.83	31.22	35.27	0.79	3163
R+6	24.2	82.6	0.38	0.26	15.5	1.26	11.3	33.4	6.92	161	0.83	32.12	36.23	0.81	3266
R+8	31.1	75.8	0.41	0.28	18.4	1.29	12.2	39.3	7.08	180	0.74	35.04	39.69	0.72	3608
R+8	31.5	89.3	0.41	0.28	18.6	1.30	12.2	46.8	7.14	182	0.74	41.93	48.51	0.72	3636
R+10	40.9	136.0	0.44	0.30	22.6	1.48	13.1	92.7	8.13	239	0.67	77.79	98.12	0.71	4443
R+10	41.7	104.1	0.44	0.30	23.0	1.50	13.1	72.4	8.24	243	0.67	60.58	71.88	0.72	4503

RILL DATA ANALYSIS SOIL: PORTNEUF DATE: JULY 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 5.61 %														
F+2	5.0	37.2	0.20	0.14	6.1	0.68	8.4	3.1	3.71	47	0.00	4.13	4.27	1.57	921
F+2	5.3	41.8	0.20	0.14	6.4	0.70	8.5	3.7	3.85	50	0.00	4.82	5.01	1.63	956
F+4	13.7	62.5	0.31	0.21	10.7	0.95	10.4	14.3	5.20	97	0.00	15.21	16.46	0.92	2002
F+4	13.5	53.5	0.31	0.21	10.6	0.94	10.4	12.1	5.16	95	0.00	12.92	13.82	0.91	1986
F+6	19.3	93.2	0.37	0.25	12.7	1.01	11.6	30.0	5.54	118	0.00	28.82	33.23	0.69	2548
F+6	20.2	76.6	0.37	0.25	13.2	1.03	11.8	25.7	5.68	125	0.00	24.27	27.17	0.70	2611
F+6	19.3	93.2	0.37	0.25	12.7	0.99	10.7	30.0	5.41	106	0.00	31.17	36.67	0.67	2487
F+6	20.2	76.6	0.37	0.25	13.2	1.02	10.8	25.7	5.59	112	0.00	26.57	30.20	0.69	2572
F+8	26.5	67.9	0.43	0.30	14.9	1.11	11.0	30.0	6.12	131	0.00	30.28	34.40	0.56	3270
F+8	28.2	70.1	0.43	0.30	15.9	1.17	11.1	33.0	6.41	142	0.00	32.94	37.50	0.59	3425
F+10	37.5	66.6	0.47	0.32	19.4	1.16	12.5	41.7	6.36	157	0.00	37.08	43.10	0.49	3712
F+10	36.7	55.0	0.47	0.32	18.9	1.14	12.5	33.6	6.24	153	0.00	29.96	33.85	0.48	3644
Rill 3	slope = 5.68 %														
R+0	2.6	57.2	0.15	0.10	4.2	0.52	8.4	2.5	2.89	33	1.19	2.05	0.00	2.18	532
R+2	8.9	40.9	0.29	0.20	7.5	0.74	8.4	6.1	4.13	56	1.19	6.82	7.02	0.83	1470
R+2	9.4	43.3	0.29	0.20	7.9	0.77	8.4	6.8	4.29	58	1.20	7.80	8.21	0.87	1526
R+4	18.4	54.2	0.36	0.25	12.4	1.12	9.4	16.6	6.23	114	1.04	18.64	20.43	0.82	2751
R+4	18.1	51.4	0.36	0.25	12.2	1.11	9.4	15.5	6.17	113	1.04	17.34	18.99	0.81	2726
R+6	23.7	72.8	0.37	0.25	15.6	1.30	10.3	28.8	7.23	157	0.92	30.13	33.40	0.90	3281
R+6	23.6	65.0	0.37	0.25	15.4	1.29	10.3	25.5	7.17	155	0.92	26.55	29.22	0.89	3256
R+8	29.0	81.1	0.39	0.27	18.1	1.31	11.3	39.3	7.28	173	0.83	37.94	42.90	0.81	3485
R+8	28.9	68.8	0.39	0.27	17.9	1.30	11.3	33.1	7.23	171	0.83	31.85	35.43	0.81	3459
R+10	40.9	70.5	0.44	0.30	22.5	1.49	12.2	48.0	8.28	228	0.74	43.02	48.31	0.73	4473
R+10	40.2	93.0	0.44	0.30	22.2	1.48	12.2	62.4	8.23	226	0.74	56.13	65.38	0.72	4443
F+2	5.1	47.0	0.20	0.14	6.2	0.73	7.9	4.0	4.05	51	0.00	5.65	5.89	1.72	994
F+2	5.4	48.8	0.20	0.14	6.6	0.76	8.1	4.4	4.20	54	0.00	6.09	6.36	1.78	1031
F+4	13.7	57.0	0.33	0.23	10.0	0.99	9.2	13.0	5.53	94	0.00	15.70	16.90	0.86	2239
F+4	14.5	63.9	0.33	0.23	10.7	1.03	9.4	15.5	5.74	101	0.00	18.34	19.91	0.90	2325
F+6	20.1	94.3	0.39	0.27	12.5	1.11	10.2	31.6	6.18	122	0.00	34.53	39.92	0.69	2959
F+6	19.7	74.6	0.39	0.27	12.3	1.11	10.0	24.5	6.15	120	0.00	27.21	30.44	0.69	2944
F+6	20.1	94.3	0.39	0.27	12.5	1.06	8.6	31.6	5.90	97	0.00	40.56	49.04	0.66	2824
F+6	19.7	74.6	0.39	0.27	12.3	1.05	8.6	24.5	5.82	95	0.00	31.58	36.53	0.65	2785
F+8	25.1	125.0	0.45	0.31	13.5	1.12	8.7	52.3	6.25	107	0.00	66.52	91.27	0.52	3452
F+8	28.8	87.5	0.45	0.31	15.5	1.24	8.9	41.9	6.89	126	0.00	52.37	63.67	0.58	3803
F+10	38.0	62.3	0.48	0.33	19.2	1.43	9.2	39.5	7.96	162	0.00	47.70	54.67	0.59	4689
F+10	38.4	64.0	0.48	0.33	19.4	1.44	9.2	41.0	8.01	164	0.00	49.41	56.86	0.59	4718

RILL DATA ANALYSIS SOIL: PORTNEUF DATE: JULY 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 5.45 %														
R+0	2.7	64.2	0.15	0.10	4.3	0.57	8.4	2.8	3.04	35	1.19	2.56	2.72	2.30	583
R+2	7.6	48.8	0.27	0.19	6.8	0.63	8.4	6.2	3.36	41	1.19	6.91	7.17	0.78	1160
R+2	8.8	50.9	0.27	0.19	7.9	0.61	8.4	7.5	3.25	39	1.19	8.67	8.67	0.76	1124
R+4	16.8	48.5	0.37	0.25	11.0	0.94	9.4	13.6	5.01	83	1.04	15.03	16.65	0.62	2373
R+4	17.0	56.2	0.37	0.25	11.2	0.95	9.4	15.9	5.07	84	1.04	17.83	19.85	0.63	2398
R+6	22.1	67.8	0.38	0.26	14.1	1.13	10.3	25.0	6.03	120	0.92	26.02	29.21	0.71	2929
R+6	23.7	65.6	0.38	0.26	15.1	1.19	10.3	25.9	6.35	129	0.92	26.96	30.16	0.75	3085
R+8	28.6	81.6	0.38	0.26	18.3	1.39	11.3	38.9	7.41	178	0.83	37.63	42.46	0.87	3604
R+8	28.1	79.3	0.38	0.26	17.9	1.37	11.3	37.1	7.31	174	0.83	35.84	40.32	0.86	3552
R+10	38.7	79.2	0.44	0.30	21.4	1.53	12.2	51.1	8.16	223	0.74	45.83	52.00	0.72	4593
R+10	37.9	79.4	0.44	0.30	20.9	1.51	12.2	50.1	8.05	219	0.74	44.95	51.00	0.71	4533
F+2	4.7	25.3	0.19	0.13	6.1	0.85	6.3	2.0	4.53	48	0.00	3.54	3.61	2.13	1101
F+2	5.1	29.7	0.19	0.13	6.5	0.88	6.5	2.5	4.71	52	0.00	4.32	4.43	2.22	1144
F+4	11.9	48.3	0.32	0.22	9.1	0.78	9.6	9.6	4.15	64	0.00	11.09	12.02	0.69	1698
F+4	12.6	57.7	0.32	0.22	9.5	0.81	9.8	12.1	4.30	68	0.00	13.74	15.12	0.71	1759
F+6	19.1	73.0	0.36	0.25	12.8	0.99	10.7	23.2	5.26	101	0.00	24.07	27.34	0.69	2420
F+6	19.4	77.4	0.36	0.25	13.0	1.00	10.7	25.0	5.32	103	0.00	25.86	29.61	0.70	2449
F+6	19.1	73.0	0.36	0.25	12.8	1.27	6.0	23.2	6.76	82	0.00	43.35	50.94	0.89	3115
F+6	19.4	77.4	0.36	0.25	13.0	1.28	6.0	25.0	6.82	83	0.00	46.56	55.35	0.89	3141
F+8	25.6	74.0	0.45	0.31	13.8	1.32	6.0	31.6	7.04	88	0.00	58.33	72.22	0.59	4052
F+8	27.3	81.0	0.45	0.31	14.7	1.37	6.1	36.9	7.30	94	0.00	67.49	85.71	0.61	4200
F+10	36.1	77.5	0.36	0.25	24.3	1.76	6.7	46.6	9.37	150	0.00	77.79	93.18	1.23	4316
F+10	34.0	67.9	0.36	0.25	22.9	1.71	6.6	38.5	9.12	142	0.00	65.01	75.81	1.20	4199
Rill 5	slope = 5.14 %														
R+0	2.7	48.3	0.15	0.10	4.4	0.51	9.4	2.2	2.57	30	1.04	1.58	0.00	1.94	522
R+2	8.1	28.2	0.32	0.22	6.2	0.65	9.4	3.8	3.27	44	1.04	3.49	3.88	0.54	1419
R+2	8.2	62.5	0.32	0.22	6.2	0.65	9.4	8.5	3.27	44	1.04	9.06	9.09	0.54	1419
R+4	17.6	43.7	0.39	0.27	10.9	0.94	10.3	12.8	4.73	83	0.92	12.86	14.25	0.53	2501
R+4	17.9	50.6	0.39	0.27	11.1	0.95	10.3	15.1	4.75	84	0.92	15.33	17.05	0.53	2515
R+6	23.4	56.4	0.39	0.27	14.6	1.06	11.3	22.0	5.33	109	0.83	20.94	23.50	0.60	2820
R+6	24.0	52.0	0.39	0.27	14.9	1.07	11.3	20.8	5.38	110	0.83	19.69	21.97	0.60	2847
R+8	30.6	86.3	0.39	0.27	19.0	1.26	12.2	44.0	6.34	153	0.74	39.36	46.19	0.71	3352
R+8	29.5	75.3	0.39	0.27	18.3	1.23	12.2	37.0	6.19	147	0.74	32.97	37.89	0.69	3273
R+10	39.9	85.8	0.37	0.25	26.1	1.59	13.1	57.0	8.00	233	0.67	47.56	54.53	0.99	4014
R+10	39.5	81.3	0.37	0.25	25.9	1.58	13.1	53.5	7.95	231	0.67	44.57	50.73	0.99	3988

RILL DATA ANALYSIS SOIL: PORTNEUF DATE: JULY 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 5.14 %														
F+2	5.8	51.1	0.22	0.15	6.4	0.69	6.3	4.9	3.46	32	0.00	8.67	9.42	1.21	1033
F+2	5.8	28.5	0.22	0.15	6.4	0.69	6.3	2.8	3.47	32	0.00	4.86	5.08	1.22	1037
F+4	14.2	68.3	0.34	0.23	10.2	0.97	6.6	16.2	4.86	56	0.00	27.16	32.08	0.71	2243
F+4	14.5	67.3	0.34	0.23	10.3	0.98	6.6	16.2	4.92	57	0.00	27.16	31.99	0.72	2269
F+6	20.7	64.7	0.39	0.27	12.9	1.14	6.8	22.3	5.72	73	0.00	36.34	43.35	0.64	3026
F+6	21.4	58.6	0.39	0.27	13.3	1.16	6.9	20.9	5.84	76	0.00	33.87	39.62	0.65	3089
F+6	20.7	64.7	0.39	0.27	12.9	1.03	8.0	22.3	5.19	74	0.00	31.11	37.03	0.58	2746
F+6	21.4	58.6	0.39	0.27	13.3	1.06	8.0	20.9	5.31	77	0.00	29.03	33.89	0.59	2810
F+8	26.5	61.9	0.43	0.30	15.0	1.15	8.1	27.4	5.78	88	0.00	37.55	44.94	0.53	3371
F+8	29.2	56.8	0.43	0.30	16.5	1.23	8.2	27.6	6.18	99	0.00	37.47	43.96	0.57	3603
F+10	43.8	63.9	0.44	0.30	24.1	1.51	9.5	46.6	7.58	156	0.00	54.37	64.60	0.67	4522
F+10	36.5	67.4	0.44	0.30	20.1	1.41	8.4	41.0	7.07	124	0.00	54.24	65.88	0.62	4219
Rill 6	slope = 5.6 %														
R+0	2.7	51.6	0.13	0.09	5.0	0.56	9.4	2.3	3.06	39	1.04	1.67	2.36	3.08	495
R+2	9.2	49.6	0.27	0.19	8.2	0.83	9.4	7.6	4.54	71	1.04	7.93	8.71	1.06	1526
R+2	9.0	59.3	0.27	0.19	8.1	0.82	9.4	8.9	4.50	70	1.04	9.54	10.38	1.05	1511
R+4	17.8	46.9	0.37	0.25	11.6	0.99	10.3	13.9	5.41	102	0.92	14.04	15.17	0.67	2490
R+4	18.2	49.7	0.37	0.25	11.9	1.01	10.3	15.0	5.54	105	0.92	15.27	16.50	0.69	2549
R+6	22.4	61.6	0.46	0.32	11.8	1.00	11.3	23.0	5.47	113	0.83	21.92	24.10	0.44	3133
R+6	25.0	51.6	0.46	0.32	13.2	1.09	11.3	21.5	5.95	128	0.83	20.46	22.24	0.48	3407
R+8	31.7	56.4	0.40	0.27	19.2	1.38	12.2	29.8	7.56	199	0.74	26.42	28.54	0.80	3766
R+8	30.4	56.5	0.40	0.27	18.4	1.34	12.2	28.6	7.34	190	0.74	25.31	27.36	0.78	3657
R+10	40.3	61.6	0.35	0.24	27.9	1.97	13.1	41.4	10.80	365	0.67	34.36	36.54	1.50	4704
R+10	40.9	67.5	0.35	0.24	28.4	1.99	13.1	46.1	10.91	371	0.67	38.33	40.94	1.51	4752
F+2	4.5	20.5	0.18	0.12	6.1	0.67	7.2	1.5	3.65	39	0.00	2.37	0.00	1.91	817
F+2	5.1	23.0	0.18	0.12	6.9	0.74	7.3	2.0	4.03	46	0.00	3.01	3.07	2.12	904
F+4	13.6	39.9	0.32	0.22	10.3	1.00	7.4	9.0	5.47	75	0.00	13.52	14.41	0.91	2178
F+4	13.9	39.6	0.32	0.22	10.5	1.01	7.4	9.2	5.55	76	0.00	13.69	14.58	0.92	2212
F+6	21.0	58.0	0.39	0.27	13.1	1.18	7.6	20.3	6.47	98	0.00	29.87	33.49	0.72	3139
F+6	20.8	60.9	0.39	0.27	12.9	1.17	7.6	21.1	6.42	96	0.00	31.05	35.04	0.72	3116
F+6	21.0	58.0	0.39	0.27	13.1	1.19	7.3	20.3	6.54	96	0.00	30.80	34.60	0.73	3176
F+6	20.8	60.9	0.39	0.27	12.9	1.19	7.3	21.1	6.50	95	0.00	32.10	36.30	0.73	3155
F+8	27.0	62.5	0.45	0.31	14.6	1.27	7.6	28.1	6.97	109	0.00	41.23	47.66	0.59	3906
F+8	28.2	49.3	0.45	0.31	15.2	1.30	7.7	23.2	7.15	115	0.00	33.50	37.40	0.60	4006
F+10	40.2	59.2	0.47	0.32	20.8	1.58	8.1	39.7	8.67	163	0.00	54.28	62.22	0.67	5071
F+10	38.0	51.3	0.47	0.32	19.6	1.53	8.0	32.5	8.38	153	0.00	44.98	50.57	0.64	4905

RILL DATA ANALYSIS SOIL: NANSENE DATE: JULY 8, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 77.93 Kinematic Viscosity = 1.114 x 10^{-6} m^2/s

Velocity Factor = 0.687 D_i = 56.1 g/mn/m^2

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 1	slope = 7.45 %														
R+0	3.4	139.8	0.23	0.16	3.57	0.49	7.5	7.9	3.57	39	4.80	6.89	0.00	1.15	695
R+2	7.1	136.0	0.31	0.21	5.55	0.57	8.4	16.1	4.16	56	4.16	16.99	17.01	0.73	1090
R+2	8.0	138.9	0.31	0.21	6.29	0.63	8.4	18.6	4.59	65	4.16	20.35	22.88	0.81	1204
R+4	17.6	161.2	0.39	0.27	10.92	0.97	10.3	47.2	7.07	151	3.24	47.58	57.47	0.79	2333
R+4	19.4	144.3	0.39	0.27	12.09	1.04	10.3	46.7	7.58	168	3.24	47.14	56.19	0.85	2501
R+6	26.1	140.2	0.43	0.30	14.74	1.20	11.3	61.0	8.75	227	2.89	57.40	67.86	0.80	3182
R+6	26.3	166.0	0.43	0.30	14.82	1.21	11.3	72.7	8.82	230	2.89	68.88	83.31	0.81	3209
R+8	32.6	196.2	0.47	0.32	16.83	1.18	13.1	106.6	8.60	258	2.34	87.88	112.67	0.66	3420
R+8	33.5	204.8	0.47	0.32	17.29	1.20	13.1	114.3	8.75	265	2.34	94.41	122.69	0.67	3478
R+10	47.6	191.5	0.52	0.36	22.20	1.34	15.9	151.9	9.77	379	1.76	104.12	132.64	0.61	4297
F+2	6.4	88.5	0.30	0.21	5.16	0.44	7.9	9.4	3.23	36	0.00	13.24	15.37	0.61	819
F+2	6.4	98.8	0.30	0.21	5.20	0.45	7.9	10.6	3.25	36	0.00	14.87	17.60	0.61	825
F+4	15.4	134.4	0.38	0.26	9.83	0.76	8.6	34.5	5.51	86	0.00	44.74	57.10	0.65	1771
F+4	14.8	107.2	0.38	0.26	9.48	0.73	8.5	26.5	5.36	82	0.00	34.62	41.80	0.63	1722
F+6	22.8	119.2	0.39	0.27	14.21	0.94	10.0	45.4	6.84	140	0.00	50.30	60.83	0.76	2255
F+6	22.2	80.2	0.39	0.27	13.80	0.92	10.0	29.7	6.68	134	0.00	32.96	37.24	0.75	2203
F+6	22.8	119.2	0.39	0.27	14.21	1.05	10.0	45.4	7.64	165	0.00	50.42	58.98	0.85	2521
F+6	22.2	80.2	0.39	0.27	13.80	1.03	9.9	29.7	7.48	159	0.00	33.14	36.69	0.84	2469
F+8	29.6	79.7	0.39	0.27	18.39	1.27	10.4	39.2	9.23	228	0.00	41.82	45.90	1.03	3045
F+8	29.0	71.2	0.39	0.27	18.07	1.25	10.4	34.5	9.11	223	0.00	36.81	39.99	1.02	3005
F+10	36.1	106.4	0.46	0.32	19.02	1.30	10.5	64.0	9.46	237	0.00	67.87	79.08	0.76	3681
F+10	36.7	78.5	0.46	0.32	19.35	1.31	10.5	48.0	9.58	242	0.00	50.87	56.69	0.77	3728
Rill 2	slope = 6.45 %														
R+0	3.6	126.8	0.24	0.16	3.62	0.50	7.5	7.6	3.16	33	4.80	6.40	0.00	0.93	740
R+2	7.9	127.7	0.32	0.22	6.02	0.72	8.4	16.9	4.54	64	4.16	18.11	21.74	0.75	1421
R+2	10.0	121.4	0.32	0.22	7.55	0.81	8.4	20.2	5.09	76	4.16	22.37	27.43	0.85	1593
R+4	18.1	168.2	0.43	0.30	10.23	0.98	9.4	50.8	6.19	113	3.65	56.55	74.45	0.57	2599
R+4	18.4	148.7	0.43	0.30	10.40	0.99	9.4	45.7	6.25	114	3.65	50.47	64.56	0.57	2625
R+6	27.1	138.5	0.45	0.31	14.59	1.22	10.3	62.5	7.70	172	3.24	64.10	80.52	0.65	3386
R+6	27.5	143.7	0.45	0.31	14.85	1.23	10.3	66.0	7.76	174	3.24	67.85	85.99	0.65	3413
R+8	36.4	171.0	0.50	0.34	17.68	1.23	13.1	103.8	7.76	221	2.34	85.53	115.02	0.53	3793
R+8	35.1	183.2	0.50	0.34	17.03	1.20	13.1	107.2	7.57	213	2.34	88.34	121.85	0.51	3700
R+10	49.3	179.2	0.52	0.36	23.01	1.37	15.9	147.3	8.65	316	1.76	100.92	135.63	0.54	4393

RILL DATA ANALYSIS   SOIL: NANSENE   DATE: JULY 8, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 6.45 %														
F+2	6.4	95.4	0.27	0.19	5.76	0.75	4.9	10.2	4.72	39	0.00	22.98	26.59	1.10	1246
F+2	6.6	66.8	0.27	0.19	5.96	0.76	5.0	7.4	4.81	41	0.00	16.38	18.05	1.12	1270
F+4	14.9	109.1	0.39	0.27	9.28	1.01	5.6	27.1	6.36	70	0.00	53.88	68.18	0.71	2423
F+4	14.5	79.2	0.39	0.27	8.99	0.99	5.5	19.1	6.24	67	0.00	38.19	44.89	0.70	2378
F+6	21.3	21.3	0.42	0.29	12.32	1.19	6.1	7.6	7.51	97	0.00	13.91	14.48	0.72	3082
F+6	20.7	65.0	0.42	0.29	11.98	1.17	6.0	22.5	7.39	94	0.00	41.55	47.47	0.71	3032
F+6	21.3	21.3	0.42	0.29	12.32	1.11	8.4	7.6	7.01	121	0.00	10.04	10.37	0.68	2876
F+6	20.7	65.0	0.42	0.29	11.98	1.09	8.4	22.5	6.86	117	0.00	29.78	33.05	0.66	2817
F+8	29.0	80.0	0.38	0.26	18.50	1.47	8.6	38.6	9.29	189	0.00	50.03	55.95	1.09	3449
F+8	28.5	83.2	0.38	0.26	18.19	1.46	8.6	39.5	9.19	186	0.00	51.24	57.60	1.08	3412
F+10	36.3	72.9	0.45	0.31	19.58	1.53	8.6	44.1	9.64	201	0.00	56.92	64.27	0.81	4238
F+10	38.0	67.6	0.45	0.31	20.47	1.57	8.6	42.8	9.92	210	0.00	55.02	61.52	0.83	4359
Rill 3	slope = 5.89 %														
R+0	3.2	127.2	0.25	0.17	3.11	0.53	6.6	6.8	3.05	27	5.62	5.88	0.00	0.83	817
R+2	9.0	121.3	0.37	0.25	5.92	0.78	7.5	18.3	4.50	56	4.80	22.26	27.41	0.56	1780
R+2	9.4	125.0	0.37	0.25	6.14	0.79	7.5	19.5	4.58	57	4.80	24.09	29.83	0.57	1813
R+4	17.7	139.9	0.42	0.29	10.24	1.07	8.4	41.3	6.14	100	4.16	50.22	65.37	0.59	2759
R+4	18.7	133.5	0.42	0.29	10.81	1.10	8.4	41.7	6.34	105	4.16	50.68	65.49	0.61	2847
R+6	26.2	156.9	0.42	0.29	15.16	1.32	9.4	68.6	7.61	153	3.65	77.62	103.28	0.73	3419
R+6	25.5	154.2	0.42	0.29	14.74	1.30	9.4	65.6	7.49	150	3.65	74.04	97.88	0.72	3367
R+8	36.1	183.1	0.41	0.28	21.35	1.46	12.2	110.1	8.42	232	2.59	97.77	132.63	0.85	3692
R+8	31.1	201.0	0.41	0.28	18.39	1.30	12.2	104.1	7.49	195	2.59	92.30	131.18	0.76	3287
R+10	44.3	189.4	0.52	0.36	20.68	1.32	15.0	139.9	7.61	245	1.93	101.72	149.61	0.48	4233
F+2	6.4	80.9	0.29	0.20	5.36	0.79	5.3	8.6	4.55	40	0.00	18.23	20.55	0.92	1412
F+2	6.5	79.5	0.29	0.20	5.44	0.80	5.3	8.6	4.59	41	0.00	18.10	20.35	0.93	1425
F+4	13.1	117.0	0.38	0.26	8.38	0.90	7.7	25.6	5.16	71	0.00	36.77	45.65	0.61	2099
F+4	14.2	93.4	0.38	0.26	9.05	0.79	7.8	22.1	4.53	59	0.00	31.26	39.17	0.53	1841
F+6	20.7	81.5	0.37	0.25	13.60	0.91	10.4	28.2	5.22	96	0.00	30.19	35.71	0.65	2066
F+6	19.5	73.9	0.37	0.25	12.79	0.86	10.3	24.0	4.96	89	0.00	25.83	30.11	0.62	1963
F+6	20.7	81.5	0.37	0.25	13.60	1.14	5.6	28.2	6.58	73	0.00	56.29	71.09	0.82	2604
F+6	19.5	73.9	0.37	0.25	12.79	1.10	5.5	24.0	6.34	69	0.00	48.38	59.55	0.79	2510
F+8	28.8	76.6	0.41	0.28	17.07	1.30	5.8	36.8	7.48	92	0.00	70.84	90.49	0.76	3279
F+8	27.9	69.3	0.41	0.28	16.50	1.27	5.7	32.2	7.34	89	0.00	62.34	77.41	0.74	3219
F+10	36.2	66.5	0.47	0.32	18.69	1.36	5.9	40.1	7.85	101	0.00	75.93	96.88	0.60	3947
F+10	35.4	77.9	0.47	0.32	18.26	1.35	5.8	45.9	7.75	98	0.00	87.32	117.67	0.60	3898

RILL DATA ANALYSIS SOIL: NANSENE DATE: JULY 8, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 6.39 %														
R+0	3.4	120.3	0.22	0.15	3.79	0.66	5.6	6.9	4.10	36	6.71	6.90	12.28	1.44	890
R+2	11.1	132.6	0.39	0.27	6.90	0.93	6.6	24.5	5.78	71	5.62	35.93	45.67	0.65	2225
R+2	10.6	133.4	0.39	0.27	6.61	0.90	6.6	23.6	5.65	69	5.62	34.41	43.81	0.63	2173
R+4	17.7	136.4	0.37	0.25	11.57	0.93	7.5	40.1	5.82	82	4.80	54.66	73.45	0.72	2122
R+4	19.3	135.4	0.37	0.25	12.67	0.99	7.5	43.6	6.19	90	4.80	59.79	80.20	0.77	2259
R+6	26.2	131.8	0.43	0.30	14.76	1.11	8.4	57.5	6.94	120	4.16	71.52	95.86	0.64	2943
R+6	23.5	158.9	0.43	0.30	13.25	1.03	8.4	62.2	6.44	108	4.16	77.70	111.90	0.59	2731
R+8	31.5	154.0	0.42	0.29	18.19	1.32	12.2	80.8	8.25	225	2.59	71.04	88.34	0.80	3419
R+8	30.9	168.0	0.42	0.29	17.86	1.35	12.2	86.6	8.44	233	2.59	76.32	95.63	0.81	3497
R+10	40.6	145.3	0.51	0.35	19.33	1.37	14.1	98.4	8.57	275	2.12	75.64	93.91	0.56	4309
F+2	6.8	76.2	0.28	0.19	5.88	0.86	5.0	8.6	5.37	49	0.00	19.05	20.97	1.16	1482
F+2	7.4	75.3	0.28	0.19	6.41	0.84	5.7	9.3	5.25	54	0.00	18.06	19.83	1.14	1450
F+4	14.1	100.2	0.34	0.23	10.03	1.01	7.0	23.5	6.31	86	0.00	37.41	43.67	0.93	2117
F+4	15.0	107.4	0.34	0.23	10.67	1.05	7.1	26.8	6.58	93	0.00	42.17	49.75	0.97	2206
F+6	19.8	98.8	0.38	0.26	12.67	1.18	7.3	32.7	7.37	113	0.00	49.96	58.94	0.87	2761
F+6	19.1	88.0	0.38	0.26	12.18	1.15	7.2	28.0	7.18	108	0.00	43.00	49.74	0.84	2690
F+6	19.8	98.8	0.38	0.26	12.67	1.23	8.5	32.7	7.68	140	0.00	42.94	48.89	0.90	2877
F+6	19.1	88.0	0.38	0.26	12.18	1.20	8.4	28.0	7.49	134	0.00	37.12	41.64	0.88	2807
F+8	27.7	88.7	0.40	0.27	16.78	1.45	9.1	40.9	9.09	195	0.00	49.89	56.01	0.97	3586
F+8	27.9	79.6	0.40	0.27	16.92	1.46	9.1	37.0	9.14	196	0.00	45.03	49.89	0.97	3604
F+10	33.1	71.9	0.45	0.31	17.83	1.51	9.2	39.6	9.43	209	0.00	47.65	52.85	0.79	4185
F+10	35.3	69.9	0.45	0.31	19.03	1.57	9.4	41.1	9.81	225	0.00	48.65	53.72	0.82	4352
Rill 5	slope = 5.57 %														
R+0	3.2	94.6	0.23	0.16	3.38	0.62	5.6	5.1	3.37	27	6.71	3.27	0.00	1.08	876
R+2	10.3	105.5	0.36	0.25	6.92	0.83	6.6	18.1	4.52	49	5.62	24.98	31.76	0.59	1843
R+2	8.1	128.4	0.36	0.25	5.48	0.82	6.6	17.4	4.48	48	5.62	23.87	30.14	0.59	1823
R+4	16.7	118.1	0.37	0.25	10.95	1.04	8.4	32.9	5.67	89	4.16	39.14	51.01	0.70	2373
R+4	19.7	149.4	0.37	0.25	12.94	1.17	8.4	49.1	6.38	106	4.16	60.53	82.95	0.79	2670
R+6	23.1	143.3	0.40	0.27	14.04	1.20	9.4	55.3	6.54	122	3.65	61.82	83.83	0.69	2960
R+6	24.4	167.3	0.40	0.27	14.79	1.25	9.4	68.0	6.81	130	3.65	76.92	109.82	0.72	3083
R+8	30.9	217.3	0.46	0.32	16.30	1.17	13.1	111.9	6.38	165	2.34	92.37	152.97	0.51	3319
R+8	29.5	200.3	0.46	0.32	15.55	1.13	13.1	98.5	6.16	156	2.34	80.98	126.81	0.49	3206
R+10	37.4	243.8	0.51	0.35	17.81	1.25	14.1	152.1	6.81	195	2.12	118.10	225.65	0.45	3931

RILL DATA ANALYSIS SOIL: NANSENE DATE: JULY 8, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 5.57 %														
F+2	6.7	110.0	0.29	0.20	5.61	0.63	6.2	12.3	3.45	31	0.00	22.03	28.07	0.70	1132
F+2	8.0	111.5	0.29	0.20	6.68	0.72	6.3	14.9	3.94	39	0.00	25.99	32.79	0.80	1293
F+4	15.1	147.8	0.40	0.27	9.13	0.91	6.7	37.1	4.93	57	0.00	61.69	99.65	0.52	2233
F+4	14.1	95.3	0.40	0.27	8.57	0.87	6.6	22.4	4.72	53	0.00	37.77	49.20	0.50	2136
F+6	21.5	106.1	0.43	0.30	12.15	1.10	7.1	38.1	5.98	80	0.00	59.91	81.14	0.55	2909
F+6	21.4	94.9	0.43	0.30	12.09	1.09	7.1	33.9	5.96	80	0.00	53.40	69.46	0.55	2900
F+6	21.5	106.1	0.43	0.30	12.15	1.29	6.7	38.1	7.04	97	0.00	63.58	80.78	0.65	3423
F+6	21.4	94.9	0.43	0.30	12.09	1.29	6.7	33.9	7.02	96	0.00	56.64	69.82	0.64	3413
F+8	30.1	84.2	0.46	0.32	15.85	1.50	6.9	42.1	8.19	127	0.00	67.65	82.28	0.66	4263
F+8	28.3	71.4	0.46	0.32	14.94	1.45	6.9	33.7	7.93	119	0.00	54.66	64.23	0.64	4127
F+10	35.5	68.7	0.47	0.32	18.31	1.62	7.1	40.6	8.85	146	0.00	63.61	74.58	0.68	4707
F+10	36.1	86.1	0.47	0.32	18.65	1.64	7.1	51.9	8.94	148	0.00	80.93	99.60	0.69	4752
Rill 6	slope = 4.83 %														
R+0	3.2	100.0	0.25	0.17	3.15	0.47	5.6	5.4	2.22	15	6.71	3.97	8.65	0.60	725
R+2	9.6	109.8	0.38	0.26	6.10	0.54	7.5	17.5	2.55	24	4.80	21.10	36.02	0.30	1265
R+2	11.2	102.2	0.38	0.26	7.14	0.61	7.5	19.0	2.88	29	4.80	23.40	39.54	0.34	1430
R+4	18.7	132.3	0.40	0.27	11.36	0.87	9.4	41.3	4.11	61	3.65	45.25	77.06	0.44	2146
R+4	20.0	129.8	0.40	0.27	12.15	0.90	9.4	43.4	4.25	64	3.65	47.71	81.09	0.45	2220
R+6	27.2	182.4	0.43	0.30	15.35	1.08	10.3	82.7	5.10	93	3.24	85.87	207.62	0.47	2864
R+6	27.5	172.3	0.43	0.30	15.51	1.09	10.3	78.9	5.15	94	3.24	81.80	175.81	0.47	2890
R+8	33.1	181.8	0.50	0.34	16.06	0.99	14.1	100.3	4.68	111	2.12	77.15	194.33	0.32	3053
R+8	35.1	177.8	0.50	0.34	17.03	1.04	14.1	104.0	4.92	119	2.12	80.07	184.96	0.33	3207
R+10	52.7	182.2	0.52	0.36	24.57	1.42	15.9	159.9	6.71	216	1.76	109.69	199.92	0.42	4554
F+2	7.2	96.7	0.32	0.22	5.48	0.66	7.6	11.6	3.11	33	0.00	16.98	21.00	0.52	1299
F+2	7.2	93.1	0.32	0.22	5.47	0.66	7.6	11.2	3.11	33	0.00	16.32	20.00	0.52	1298
F+4	16.6	96.8	0.40	0.27	10.09	1.00	8.9	26.8	4.73	71	0.00	33.54	42.09	0.50	2469
F+4	15.1	59.2	0.40	0.27	9.18	0.93	8.8	14.9	4.41	63	0.00	18.87	21.51	0.47	2301
F+6	22.6	60.1	0.37	0.25	14.79	1.04	11.1	22.6	4.91	94	0.00	22.55	25.77	0.61	2369
F+6	19.1	56.2	0.37	0.25	12.53	1.02	11.1	17.9	4.81	91	0.00	17.96	20.00	0.60	2321
F+6	22.6	60.1	0.37	0.25	14.79	1.13	8.9	22.6	5.34	85	0.00	28.30	32.88	0.66	2576
F+6	19.1	56.2	0.37	0.25	12.53	1.01	8.5	17.9	4.79	69	0.00	23.50	27.21	0.59	2310
F+8	28.3	77.2	0.44	0.30	15.60	1.17	9.0	36.4	5.53	91	0.00	44.90	57.30	0.48	3172
F+8	28.0	52.8	0.44	0.30	15.41	1.16	9.0	24.6	5.48	90	0.00	30.47	35.61	0.48	3147
F+10	35.2	48.5	0.46	0.32	18.56	1.31	9.4	28.5	6.21	113	0.00	33.81	38.96	0.50	3725
F+10	36.8	50.9	0.46	0.32	19.39	1.35	9.4	31.2	6.40	119	0.00	36.93	42.86	0.51	3843

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 99.59 Kinematic Viscosity = 1.114 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 61.05 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 6.70 %														
R+0	4.1	111.4	0.24	0.16	4.17	0.54	7.5	7.7	3.54	50	5.22	6.14	9.83	1.04	799
R+2	10.4	144.9	0.48	0.33	5.24	0.56	8.8	25.1	3.67	61	4.33	27.48	32.81	0.27	1658
R+2	10.5	102.5	0.48	0.33	5.30	0.57	8.8	17.9	3.74	63	4.33	18.42	21.94	0.28	1687
R+4	18.8	95.8	0.46	0.32	9.93	0.83	9.4	30.1	5.44	119	3.97	31.64	35.95	0.44	2355
R+4	19.3	92.8	0.46	0.32	10.17	0.84	9.4	29.8	5.51	121	3.97	31.35	35.58	0.44	2383
R+6	26.1	103.4	0.47	0.32	13.49	1.11	10.0	45.0	7.28	196	3.66	46.37	51.71	0.56	3217
R+6	25.7	74.4	0.47	0.32	13.28	1.10	10.0	31.9	7.21	193	3.66	31.80	35.36	0.55	3188
R+8	30.8	78.7	0.49	0.34	15.27	1.26	10.6	40.5	8.26	251	3.39	38.90	42.75	0.58	3807
R+8	32.0	81.2	0.49	0.34	15.84	1.29	10.6	43.3	8.46	260	3.39	41.88	45.96	0.60	3898
R+10	42.4	80.3	0.49	0.34	20.97	1.52	11.3	56.7	9.97	353	3.14	52.82	57.49	0.71	4593
R+10	41.8	78.2	0.49	0.34	20.71	1.51	11.3	54.6	9.90	349	3.14	50.74	55.20	0.70	4563
F+2	5.6	33.7	0.24	0.16	5.64	0.68	6.1	3.1	4.47	57	0.00	5.73	5.89	1.32	1009
F+2	5.8	27.9	0.24	0.16	5.91	0.70	6.2	2.7	4.62	61	0.00	4.92	5.03	1.36	1042
F+4	14.5	59.5	0.35	0.24	10.06	0.98	7.4	14.4	6.40	120	0.00	21.53	22.93	0.89	2107
F+4	14.7	58.4	0.35	0.24	10.16	0.98	7.5	14.3	6.44	121	0.00	21.26	22.62	0.89	2118
F+6	20.4	57.6	0.41	0.28	12.10	1.11	7.6	19.6	7.28	149	0.00	28.59	30.66	0.74	2805
F+6	19.5	55.5	0.41	0.28	11.55	1.07	7.6	18.0	7.04	141	0.00	26.44	28.28	0.71	2715
F+6	20.4	57.6	0.41	0.28	12.10	1.17	6.4	19.6	7.70	136	0.00	34.06	36.78	0.78	2968
F+6	19.5	55.5	0.41	0.28	11.55	1.14	6.4	18.0	7.48	129	0.00	31.54	33.97	0.76	2883
F+8	28.3	58.2	0.41	0.28	16.76	1.42	6.7	27.5	9.33	191	0.00	45.31	48.91	0.94	3599
F+8	26.0	60.1	0.41	0.28	15.37	1.35	6.6	26.0	8.88	175	0.00	43.56	47.16	0.90	3426
F+10	37.5	53.1	0.44	0.30	20.67	1.60	7.0	33.2	10.46	236	0.00	52.69	56.79	0.92	4330
F+10	36.7	53.8	0.44	0.30	20.22	1.58	7.0	32.9	10.34	231	0.00	52.46	56.60	0.91	4279
Rill 2	slope = 6.93 %														
R+0	3.9	116.4	0.27	0.19	3.50	0.44	6.9	7.6	2.96	35	5.79	6.42	9.70	0.69	727
R+2	10.7	141.2	0.48	0.33	5.43	0.57	8.1	25.3	3.84	61	4.74	29.79	34.35	0.28	1678
R+2	10.2	98.9	0.48	0.33	5.17	0.55	8.1	16.9	3.71	58	4.74	18.29	21.26	0.27	1619
R+4	16.5	87.0	0.46	0.32	8.68	0.82	8.8	23.9	5.58	115	4.33	26.00	29.42	0.45	2333
R+4	17.8	78.8	0.46	0.32	9.36	0.87	8.8	23.3	5.91	125	4.33	25.30	28.65	0.47	2471
R+6	24.2	80.5	0.49	0.34	12.00	1.04	9.4	32.5	7.08	176	3.97	34.56	38.41	0.50	3155
R+6	24.3	83.7	0.49	0.34	12.05	1.05	9.4	34.0	7.10	177	3.97	36.26	40.27	0.50	3166
R+8	32.6	76.4	0.48	0.33	16.48	1.31	10.6	41.5	8.88	280	3.39	40.02	43.83	0.66	3878
R+8	32.3	84.5	0.48	0.33	16.34	1.30	10.6	45.5	8.82	277	3.39	44.21	48.46	0.65	3848
R+10	42.0	94.1	0.50	0.34	20.36	1.52	11.3	65.8	10.31	371	3.14	61.81	67.58	0.70	4687
R+10	42.9	85.8	0.50	0.34	20.80	1.54	11.3	61.3	10.44	378	3.14	57.38	62.48	0.71	4749

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 6.93 %														
F+2	6.1	33.0	0.27	0.19	5.49	0.57	7.4	3.4	3.89	57	0.00	5.02	5.17	0.91	954
F+2	6.2	29.8	0.27	0.19	5.55	0.58	7.4	3.1	3.92	58	0.00	4.58	4.71	0.91	963
F+4	14.7	46.8	0.36	0.25	9.90	0.91	8.1	11.5	6.14	123	0.00	15.71	16.49	0.80	2009
F+4	14.8	46.4	0.36	0.25	9.95	0.91	8.1	11.4	6.16	124	0.00	15.64	16.42	0.81	2017
F+6	20.1	49.9	0.39	0.27	12.49	0.97	9.7	16.7	6.59	163	0.00	19.21	20.27	0.74	2337
F+6	19.4	43.1	0.39	0.27	12.06	0.95	9.6	13.9	6.43	155	0.00	16.16	16.93	0.72	2279
F+6	20.1	49.9	0.39	0.27	12.49	1.04	6.9	16.7	7.09	130	0.00	26.73	28.61	0.79	2513
F+6	19.4	43.1	0.39	0.27	12.06	1.02	6.9	13.9	6.91	125	0.00	22.38	23.73	0.77	2452
F+8	28.2	49.3	0.40	0.27	17.13	1.29	7.2	23.2	8.74	185	0.00	35.81	38.27	0.93	3179
F+8	26.2	50.4	0.40	0.27	15.87	1.23	7.1	22.0	8.32	170	0.00	34.28	36.70	0.88	3026
F+10	36.0	51.8	0.45	0.31	19.42	1.39	7.3	31.1	9.45	212	0.00	47.21	51.05	0.79	3867
F+10	36.6	50.1	0.45	0.31	19.74	1.41	7.3	30.6	9.55	216	0.00	46.34	49.97	0.80	3906
Rill 3	slope = 6.61 %														
R+0	4.8	108.9	0.27	0.19	4.28	0.59	7.5	8.6	3.80	55	5.22	7.58	9.90	0.89	978
R+2	10.3	128.9	0.39	0.27	6.40	0.68	8.8	22.1	4.40	80	4.33	23.72	25.77	0.49	1635
R+2	10.2	94.0	0.39	0.27	6.33	0.68	8.8	15.9	4.40	80	4.33	15.90	17.91	0.49	1635
R+4	15.8	93.9	0.46	0.32	8.31	0.84	9.4	24.7	5.43	118	3.97	25.24	28.08	0.44	2383
R+4	17.5	87.7	0.46	0.32	9.23	0.91	9.4	25.6	5.89	133	3.97	26.31	29.34	0.47	2581
R+6	24.7	97.9	0.48	0.33	12.50	1.14	10.0	40.4	7.37	199	3.66	41.20	45.66	0.54	3375
R+6	26.1	87.9	0.48	0.33	13.19	1.19	10.0	38.2	7.70	213	3.66	38.81	42.91	0.57	3523
R+8	30.2	72.6	0.49	0.34	14.93	1.26	10.6	36.5	8.15	246	3.39	34.75	38.35	0.58	3807
R+8	30.4	82.3	0.49	0.34	15.04	1.27	10.6	41.7	8.22	249	3.39	40.15	44.25	0.58	3838
R+10	36.3	98.1	0.52	0.36	16.94	1.38	11.3	59.3	8.93	299	3.14	55.47	61.35	0.56	4425
R+10	42.4	88.4	0.52	0.36	19.77	1.54	11.3	62.4	9.96	352	3.14	58.53	64.30	0.63	4939
F+2	5.8	28.5	0.29	0.20	4.86	0.57	7.7	2.8	3.69	54	0.00	3.99	4.10	0.74	1019
F+2	5.9	35.9	0.29	0.20	4.97	0.58	7.7	3.6	3.75	56	0.00	5.10	5.27	0.76	1035
F+4	13.8	35.2	0.38	0.26	8.83	0.85	9.3	8.1	5.50	119	0.00	9.72	10.07	0.65	1992
F+4	14.1	44.6	0.38	0.26	8.97	0.86	9.3	10.5	5.56	122	0.00	12.46	13.03	0.65	2015
F+6	19.0	45.5	0.41	0.28	11.24	1.00	9.9	14.4	6.46	163	0.00	16.11	16.87	0.65	2527
F+6	18.9	36.5	0.41	0.28	11.18	1.00	9.9	11.5	6.44	162	0.00	12.87	13.35	0.65	2518
F+6	19.0	45.5	0.41	0.28	11.24	1.11	8.2	14.4	7.20	158	0.00	19.54	20.49	0.73	2813
F+6	18.9	36.5	0.41	0.28	11.18	1.11	8.2	11.5	7.17	157	0.00	15.59	16.19	0.72	2801
F+8	28.1	43.9	0.43	0.30	15.86	1.41	8.5	20.6	9.12	233	0.00	26.94	28.21	0.84	3738
F+8	26.5	35.2	0.43	0.30	14.94	1.36	8.4	15.6	8.77	218	0.00	20.49	21.26	0.81	3594
F+10	35.7	42.8	0.45	0.31	19.26	1.60	8.7	25.5	10.33	287	0.00	32.53	34.06	0.87	4430
F+10	34.5	50.6	0.45	0.31	18.58	1.56	8.7	29.1	10.10	277	0.00	37.31	39.42	0.85	4331

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Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 4	slope = 6.45 %														
R+0	4.1	123.7	0.27	0.19	3.66	0.47	7.5	8.4	2.97	38	5.22	7.23	7.60	0.69	783
R+2	11.1	124.2	0.43	0.30	6.25	0.72	8.8	22.9	4.54	84	4.33	24.79	26.95	0.42	1909
R+2	10.8	93.0	0.43	0.30	6.09	0.70	8.8	16.7	4.42	81	4.33	16.89	18.82	0.41	1856
R+4	19.1	97.6	0.46	0.32	10.10	1.01	10.0	31.1	6.38	160	3.66	30.94	34.36	0.51	2865
R+4	17.7	76.8	0.46	0.32	9.33	0.96	10.0	22.6	6.06	149	3.66	21.49	24.23	0.49	2723
R+6	25.2	89.7	0.48	0.33	12.75	1.17	10.6	37.7	7.39	212	3.39	36.03	39.85	0.54	3463
R+6	26.8	82.5	0.48	0.33	13.57	1.22	10.6	36.9	7.70	226	3.39	35.19	38.89	0.57	3611
R+8	31.7	78.8	0.49	0.34	15.68	1.29	11.3	41.6	8.14	260	3.14	37.94	41.78	0.58	3898
R+8	30.8	97.7	0.49	0.34	15.24	1.26	11.3	50.1	7.95	251	3.14	46.33	51.31	0.56	3807
R+10	43.9	86.8	0.50	0.34	21.30	1.58	11.9	63.5	9.97	373	2.92	56.48	61.95	0.68	4872
R+10	42.1	100.7	0.50	0.34	20.45	1.54	11.9	70.7	9.72	359	2.92	63.22	69.91	0.66	4749
F+2	6.5	60.3	0.29	0.20	5.45	0.91	4.0	6.5	5.75	55	0.00	18.14	19.31	1.16	1629
F+2	6.4	54.5	0.29	0.20	5.38	0.90	4.0	5.8	5.71	54	0.00	16.23	17.18	1.15	1617
F+4	14.8	55.0	0.37	0.25	9.73	0.96	9.0	13.6	6.06	134	0.00	16.74	17.65	0.75	2189
F+4	15.0	39.8	0.37	0.25	9.82	0.96	9.1	9.9	6.09	136	0.00	12.20	12.67	0.76	2201
F+6	21.6	36.0	0.40	0.27	13.09	1.01	8.4	13.0	6.36	135	0.00	17.08	17.95	0.68	2487
F+6	20.9	31.8	0.40	0.27	12.67	1.15	9.6	11.1	7.28	187	0.00	12.87	13.27	0.77	2843
F+6	21.6	36.0	0.40	0.27	13.09	1.18	8.7	13.0	7.44	175	0.00	16.62	17.26	0.79	2906
F+6	20.9	31.8	0.40	0.27	12.67	1.16	8.6	11.1	7.29	168	0.00	14.35	14.84	0.77	2850
F+8	30.5	39.7	0.44	0.30	16.80	1.36	9.4	20.2	8.57	236	0.00	23.77	24.85	0.75	3686
F+8	30.1	40.9	0.44	0.30	16.60	1.35	9.4	20.5	8.52	233	0.00	24.30	25.44	0.75	3663
F+10	38.1	41.9	0.49	0.34	18.86	1.44	9.9	26.6	9.12	271	0.00	29.92	31.50	0.65	4364
F+10	37.5	37.6	0.49	0.34	18.55	1.43	9.8	23.5	9.04	266	0.00	26.59	27.84	0.64	4326
Rill 5	slope = 6.21 %														
R+0	3.6	86.8	0.27	0.19	3.25	0.43	7.5	5.2	2.61	32	5.22	2.53	5.74	0.61	716
R+2	11.1	112.1	0.46	0.32	5.85	0.60	8.1	20.7	3.65	56	4.74	23.61	26.98	0.29	1702
R+2	11.4	96.7	0.46	0.32	6.00	0.61	8.1	18.3	3.71	58	4.74	20.34	23.35	0.30	1730
R+4	16.5	83.4	0.47	0.32	8.53	0.81	8.8	23.0	4.92	95	4.33	24.84	28.38	0.38	2348
R+4	18.3	74.4	0.47	0.32	9.43	0.86	8.8	22.6	5.23	104	4.33	24.43	27.92	0.40	2493
R+6	26.3	75.8	0.49	0.34	13.02	1.05	9.4	33.2	6.38	151	3.97	35.35	39.77	0.45	3173
R+6	25.7	67.6	0.49	0.34	12.74	1.03	9.4	29.0	6.26	146	3.97	30.37	34.24	0.44	3112
R+8	34.4	72.2	0.55	0.38	15.18	1.30	10.0	41.4	7.90	221	3.66	42.35	47.06	0.44	4409
R+8	34.7	72.7	0.55	0.38	15.32	1.31	10.0	42.1	7.96	224	3.66	43.11	47.89	0.45	4443
R+10	43.3	86.7	0.55	0.38	19.09	1.51	10.6	62.5	9.18	294	3.39	61.97	68.93	0.52	5122
R+10	42.9	65.5	0.55	0.38	18.94	1.50	10.6	46.9	9.12	291	3.39	45.63	50.22	0.51	5088

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Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 5	slope = 6.21 %														
F+2	6.9	24.6	0.30	0.21	5.60	0.63	8.4	2.8	3.82	63	0.00	3.75	3.83	0.72	1164
F+2	6.7	27.4	0.30	0.21	5.39	0.61	8.4	3.0	3.72	60	0.00	4.05	4.15	0.70	1132
F+4	15.3	39.3	0.39	0.27	9.50	0.85	9.4	10.0	5.16	110	0.00	11.78	12.35	0.58	2043
F+4	15.2	38.9	0.39	0.27	9.45	0.85	9.4	9.8	5.14	109	0.00	11.60	12.16	0.57	2035
F+6	20.0	39.7	0.41	0.28	11.81	1.00	9.9	13.2	6.06	147	0.00	14.84	15.55	0.61	2522
F+6	20.8	40.1	0.41	0.28	12.30	1.03	10.0	13.9	6.24	155	0.00	15.47	16.21	0.63	2596
F+6	20.0	39.7	0.41	0.28	11.81	1.10	7.0	13.2	6.69	120	0.00	21.10	22.36	0.68	2785
F+6	20.8	40.1	0.41	0.28	12.30	1.13	7.0	13.9	6.87	126	0.00	22.07	23.39	0.69	2860
F+8	31.4	50.4	0.47	0.32	16.19	1.35	7.3	26.3	8.18	171	0.00	39.88	43.31	0.63	3902
F+8	28.9	55.2	0.47	0.32	14.91	1.28	7.2	26.6	7.78	156	0.00	40.89	44.82	0.60	3709
F+10	36.6	38.1	0.51	0.35	17.40	1.41	7.4	23.2	8.55	185	0.00	34.70	37.08	0.56	4424
F+10	38.6	37.4	0.51	0.35	18.38	1.47	9.8	24.1	8.92	259	0.00	27.39	28.75	0.58	4617
Rill 6	slope = 5.90 %														
R+0	3.3	94.9	0.26	0.18	3.10	0.34	8.1	5.3	1.96	22	4.74	2.45	5.59	0.49	545
R+2	11.4	128.4	0.43	0.30	6.45	0.64	8.8	24.5	3.70	62	4.33	26.73	31.10	0.34	1697
R+2	11.3	95.6	0.43	0.30	6.37	0.63	8.8	18.0	3.64	60	4.33	18.51	21.62	0.33	1671
R+4	16.6	83.8	0.49	0.34	8.21	0.78	9.4	23.2	4.50	89	3.97	23.46	26.78	0.32	2357
R+4	18.3	79.6	0.49	0.34	9.07	0.84	9.4	24.3	4.85	100	3.97	24.79	28.14	0.34	2538
R+6	24.8	58.6	0.46	0.32	13.09	1.12	10.0	24.2	6.47	164	3.66	23.28	26.20	0.52	3177
R+6	24.5	73.0	0.46	0.32	12.90	1.11	10.0	29.8	6.41	162	3.66	29.40	32.73	0.51	3149
R+8	32.3	62.6	0.49	0.34	15.99	1.34	10.6	33.7	7.74	228	3.39	31.83	35.04	0.55	4049
R+8	29.6	74.6	0.49	0.34	14.68	1.26	10.6	36.9	7.26	207	3.39	35.15	38.75	0.51	3801
R+10	40.3	63.6	0.55	0.38	17.79	1.43	11.3	42.7	8.24	265	3.14	39.07	42.73	0.46	4841
R+10	41.9	80.2	0.55	0.38	18.47	1.47	11.3	56.0	8.49	277	3.14	52.14	57.35	0.48	4986
F+2	7.3	22.4	0.27	0.19	6.56	0.74	8.0	2.7	4.27	70	0.00	3.78	3.85	1.00	1231
F+2	7.1	22.2	0.27	0.19	6.36	0.73	7.9	2.6	4.20	68	0.00	3.68	3.76	0.98	1211
F+4	15.9	36.8	0.37	0.25	10.40	0.99	9.3	9.7	5.72	127	0.00	11.56	12.03	0.71	2259
F+4	15.9	36.4	0.37	0.25	10.44	0.99	9.3	9.7	5.73	128	0.00	11.49	11.95	0.71	2266
F+6	20.1	41.5	0.39	0.27	12.48	1.13	9.7	13.9	6.50	161	0.00	15.84	16.57	0.73	2710
F+6	19.9	39.2	0.39	0.27	12.37	1.12	9.7	13.0	6.46	159	0.00	14.87	15.51	0.72	2692
F+6	20.1	41.5	0.39	0.27	12.48	0.97	7.1	13.9	5.60	94	0.00	21.57	23.34	0.63	2332
F+6	19.9	39.2	0.39	0.27	12.37	0.96	7.1	13.0	5.56	93	0.00	20.23	21.79	0.62	2316
F+8	29.5	33.4	0.43	0.30	16.64	1.18	7.5	16.4	6.82	133	0.00	24.30	25.93	0.63	3133
F+8	29.0	39.3	0.43	0.30	16.38	1.17	7.5	19.0	6.75	131	0.00	28.22	30.49	0.62	3101
F+10	37.3	43.3	0.46	0.32	19.65	1.32	7.8	26.9	7.60	162	0.00	38.50	42.10	0.61	3734
F+10	38.4	50.4	0.46	0.32	20.23	1.34	7.8	32.2	7.74	168	0.00	45.85	50.92	0.62	3803

RILL DATA ANALYSIS SOIL: ZAHL DATE: JULY 13, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 99.59 Kinematic Viscosity = 0.963 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 49.92 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.15 %														
R+0	3.1	64.3	0.27	0.19	2.75	0.42	6.3	3.3	3.35	38	5.24	0.80	3.22	0.76	818
R+2	23.0	74.9	0.56	0.38	9.98	0.98	6.9	28.8	7.82	151	4.69	43.03	45.05	0.42	3915
R+2	9.7	76.8	0.56	0.38	4.20	0.56	6.9	12.4	4.47	65	4.69	15.88	16.12	0.24	2237
R+4	15.3	70.4	0.47	0.32	7.89	0.81	8.2	17.9	6.46	134	3.84	21.33	22.82	0.50	2716
R+4	16.9	68.3	0.47	0.32	8.75	0.88	8.2	19.3	7.02	152	3.84	23.22	24.85	0.54	2951
R+6	23.6	70.4	0.49	0.34	11.68	1.10	8.8	27.7	8.77	228	3.51	32.56	34.32	0.62	3845
R+6	23.3	66.5	0.49	0.34	11.53	1.09	8.8	25.8	8.69	225	3.51	30.14	31.88	0.62	3810
R+8	29.5	68.9	0.50	0.34	14.30	1.13	10.7	33.8	9.01	289	2.74	33.58	35.16	0.61	4031
R+8	29.8	67.7	0.50	0.34	14.44	1.13	10.7	33.6	9.01	289	2.74	33.29	34.87	0.61	4031
R+10	34.1	117.6	0.60	0.41	13.81	1.03	12.6	66.9	8.22	296	2.20	58.81	63.03	0.39	4409
R+10	35.2	135.7	0.60	0.41	14.24	1.06	12.6	79.6	8.45	309	2.20	70.37	76.57	0.40	4537
F+2	4.7	63.0	0.29	0.20	3.97	0.37	9.4	5.0	2.95	47	0.00	6.09	6.22	0.60	764
F+2	5.0	54.9	0.29	0.20	4.19	0.39	9.4	4.6	3.09	51	0.00	5.58	5.65	0.62	801
F+4	13.6	141.3	0.42	0.29	7.86	0.62	10.2	32.1	4.97	112	0.00	36.22	41.24	0.48	1865
F+4	14.5	109.1	0.42	0.29	8.40	0.66	10.3	26.4	5.24	123	0.00	29.59	32.21	0.50	1968
F+6	19.6	70.3	0.45	0.31	10.55	0.78	10.7	22.9	6.25	167	0.00	24.62	25.60	0.52	2517
F+6	19.8	64.3	0.45	0.31	10.67	0.79	10.7	21.2	6.31	169	0.00	22.71	23.46	0.53	2539
F+6	19.6	70.3	0.45	0.31	10.55	0.77	12.7	22.9	6.13	192	0.00	20.72	21.32	0.51	2468
F+6	19.8	64.3	0.45	0.31	10.67	0.78	12.7	21.2	6.19	195	0.00	19.13	19.58	0.52	2491
F+8	26.5	74.4	0.47	0.32	13.68	0.95	13.1	32.9	7.60	274	0.00	28.81	29.67	0.58	3196
F+8	27.9	76.0	0.47	0.32	14.39	0.99	13.2	35.3	7.92	293	0.00	30.75	31.68	0.61	3330
F+10	34.2	72.6	0.54	0.37	15.37	0.87	16.3	41.4	6.95	297	0.00	29.19	30.39	0.41	3357
F+10	33.9	85.3	0.54	0.37	15.25	0.87	16.3	48.2	6.90	294	0.00	34.07	35.98	0.40	3335
Rill 2	slope = 7.66 %														
R+0	3.5	61.9	0.28	0.19	3.01	0.38	6.3	3.6	2.85	30	5.24	1.30	0.00	0.62	759
R+2	11.5	98.6	0.49	0.34	5.71	0.65	6.9	18.9	4.87	74	4.69	26.71	26.97	0.34	2272
R+2	10.3	63.8	0.49	0.34	5.12	0.60	6.9	11.0	4.50	66	4.69	13.56	14.17	0.32	2097
R+4	18.6	71.1	0.58	0.40	7.77	0.83	8.2	22.0	6.22	127	3.84	27.06	29.04	0.31	3434
R+4	18.2	58.8	0.58	0.40	7.59	0.82	8.2	17.8	6.15	124	3.84	21.14	23.05	0.31	3393
R+6	22.5	73.8	0.52	0.36	10.52	0.93	8.8	27.7	6.97	162	3.51	32.63	34.99	0.44	3450
R+6	24.8	68.5	0.52	0.36	11.57	1.00	8.8	28.3	7.50	180	3.51	33.38	35.81	0.47	3710
R+8	29.7	126.0	0.46	0.32	15.67	1.23	11.3	62.4	9.22	316	2.54	60.67	65.19	0.74	4036
R+8	31.2	103.4	0.46	0.32	16.45	1.28	11.3	53.8	9.60	336	2.54	51.95	55.17	0.77	4200
R+10	34.7	156.1	0.48	0.33	17.55	1.21	12.6	90.4	9.07	343	2.20	80.16	88.76	0.67	4143
R+10	37.6	120.7	0.48	0.33	18.98	1.29	12.6	75.6	9.67	378	2.20	66.68	71.74	0.71	4417

RILL DATA ANALYSIS   SOIL: ZAHL   DATE: JULY 13, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 7.66 %														
F+2	4.8	32.2	0.27	0.19	4.34	0.61	6.0	2.6	4.56	58	0.00	5.01	0.00	1.06	1172
F+2	5.0	42.7	0.27	0.19	4.51	0.63	6.0	3.6	4.69	61	0.00	6.84	0.00	1.09	1205
F+4	13.6	65.9	0.44	0.30	7.51	0.90	6.5	14.9	6.75	114	0.00	26.30	27.25	0.59	2825
F+4	13.7	57.1	0.44	0.30	7.55	0.90	6.5	13.0	6.77	115	0.00	22.91	23.50	0.59	2836
F+6	19.6	61.0	0.41	0.28	11.59	1.19	7.2	19.9	8.93	190	0.00	31.99	32.66	0.90	3485
F+6	19.8	46.2	0.41	0.28	11.72	1.20	7.2	15.2	8.99	193	0.00	24.42	24.59	0.91	3509
F+6	19.6	61.0	0.41	0.28	11.59	1.28	7.0	19.9	9.62	207	0.00	32.93	33.48	0.97	3753
F+6	19.8	46.2	0.41	0.28	11.72	1.29	7.0	15.2	9.68	209	0.00	25.15	25.25	0.98	3778
F+8	26.6	68.8	0.44	0.30	14.67	1.24	9.2	30.5	9.31	261	0.00	38.00	39.06	0.82	3900
F+8	26.8	78.3	0.44	0.30	14.79	1.25	9.2	35.0	9.36	264	0.00	43.53	45.15	0.82	3921
F+10	38.6	98.1	0.51	0.35	18.36	1.45	9.6	63.1	10.84	342	0.00	75.46	80.64	0.71	5263
F+10	36.1	130.8	0.51	0.35	17.19	1.38	9.5	78.8	10.38	316	0.00	95.36	106.02	0.68	5036
Rill 3	slope = 7.32 %														
R+0	2.7	47.5	0.25	0.17	2.64	0.33	6.3	2.2	2.36	23	5.24	0.00	0.00	0.63	595
R+2	11.0	87.4	0.46	0.32	5.81	0.72	6.9	16.0	5.16	81	4.69	21.91	23.23	0.41	2363
R+2	9.9	71.6	0.46	0.32	5.22	0.67	6.9	11.8	4.80	73	4.69	14.89	16.09	0.39	2199
R+4	17.0	73.5	0.46	0.32	8.99	0.87	8.2	20.9	6.23	127	3.84	25.48	27.70	0.50	2855
R+4	17.0	66.0	0.46	0.32	8.94	0.86	8.2	18.7	6.16	125	3.84	22.35	24.49	0.49	2822
R+6	22.0	92.6	0.48	0.33	11.13	0.99	8.8	34.0	7.09	166	3.51	40.78	44.14	0.52	3390
R+6	23.7	98.1	0.48	0.33	11.97	1.04	8.8	38.7	7.45	179	3.51	46.94	50.96	0.55	3561
R+8	29.6	115.7	0.47	0.32	15.27	1.25	10.7	57.0	8.95	286	2.74	58.46	63.18	0.69	4191
R+8	31.4	118.8	0.47	0.32	16.19	1.29	10.7	62.1	9.24	300	2.74	63.94	69.29	0.71	4325
R+10	36.6	130.0	0.45	0.31	19.72	1.36	12.6	79.3	9.74	382	2.20	70.05	75.90	0.82	4366
R+10	38.2	164.0	0.45	0.31	20.59	1.40	12.6	104.4	10.03	399	2.20	92.98	103.45	0.84	4494
F+2	5.2	62.6	0.25	0.17	5.01	0.59	6.6	5.4	4.25	57	0.00	9.45	0.00	1.16	1059
F+2	5.5	59.5	0.25	0.17	5.39	0.63	6.6	5.5	4.51	63	0.00	9.59	0.00	1.22	1122
F+4	13.6	81.8	0.36	0.25	9.14	0.94	6.9	18.5	6.74	120	0.00	30.89	32.43	0.88	2415
F+4	13.9	79.6	0.36	0.25	9.34	0.96	6.9	18.4	6.84	123	0.00	30.67	32.11	0.90	2454
F+6	19.7	103.1	0.40	0.27	11.92	1.13	7.1	33.8	8.10	162	0.00	54.84	59.43	0.86	3226
F+6	20.3	89.4	0.40	0.27	12.30	1.15	7.1	30.2	8.27	168	0.00	48.91	52.11	0.88	3294
F+6	19.7	103.1	0.40	0.27	11.92	1.06	8.4	33.8	7.60	176	0.00	46.04	49.41	0.81	3029
F+6	20.3	89.4	0.40	0.27	12.30	1.09	8.5	30.2	7.78	183	0.00	41.12	43.45	0.83	3100
F+8	23.7	156.1	0.46	0.32	12.49	1.10	8.5	61.6	7.87	186	0.00	83.71	98.28	0.63	3606
F+8	26.7	158.4	0.46	0.32	14.10	1.20	8.6	70.5	8.59	214	0.00	94.79	111.13	0.69	3934
F+10	36.4	118.7	0.49	0.34	18.00	1.42	8.8	71.9	10.17	283	0.00	94.30	105.17	0.72	4961
F+10	35.2	139.1	0.49	0.34	17.42	1.39	8.7	81.6	9.94	273	0.00	107.33	123.28	0.70	4852

RILL DATA ANALYSIS SOIL: ZAHL DATE: JULY 13, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 7.84 %														
R+0	3.2	50.8	0.26	0.18	2.97	0.44	6.3	2.7	3.38	39	5.24	0.00	0.00	0.83	827
R+2	11.1	73.8	0.47	0.32	5.72	0.71	6.9	13.6	5.45	88	4.69	17.91	18.38	0.42	2381
R+2	10.6	64.3	0.47	0.32	5.45	0.69	6.9	11.3	5.29	84	4.69	14.08	14.81	0.41	2314
R+4	18.1	62.2	0.53	0.36	8.30	0.82	8.2	18.8	6.29	129	3.84	22.53	23.73	0.38	3100
R+4	17.9	65.7	0.53	0.36	8.20	0.81	8.2	19.6	6.21	126	3.84	23.69	24.78	0.38	3063
R+6	22.8	66.7	0.49	0.34	11.31	1.03	8.8	25.4	7.90	195	3.51	29.57	31.42	0.56	3601
R+6	23.6	81.4	0.49	0.34	11.70	1.06	8.8	32.0	8.13	204	3.51	38.26	40.41	0.58	3705
R+8	27.1	90.2	0.44	0.30	14.95	1.21	10.7	40.7	9.28	302	2.74	40.97	43.09	0.81	3798
R+8	28.2	88.6	0.44	0.30	15.54	1.25	10.7	41.6	9.59	317	2.74	41.92	44.07	0.84	3924
R+10	31.6	162.9	0.50	0.34	15.32	1.17	12.6	85.7	8.98	338	2.20	75.94	83.07	0.61	4173
R+10	36.8	120.2	0.50	0.34	17.87	1.27	12.6	73.8	9.74	382	2.20	65.04	69.38	0.66	4530
F+2	4.5	14.6	0.25	0.17	4.38	0.34	4.4	1.1	2.59	18	0.00	2.87	2.86	0.70	603
F+2	4.7	26.5	0.25	0.17	4.54	0.34	4.4	2.1	2.64	19	0.00	5.33	5.45	0.72	613
F+4	12.1	54.3	0.34	0.23	8.60	0.47	5.9	10.9	3.63	41	0.00	21.23	23.88	0.53	1148
F+4	12.9	52.2	0.34	0.23	9.22	1.06	6.0	11.2	8.11	139	0.00	21.40	21.58	1.19	2564
F+6	19.2	54.4	0.38	0.26	12.26	1.27	6.8	17.4	9.72	205	0.00	29.44	29.74	1.14	3433
F+6	19.4	51.0	0.38	0.26	12.36	1.27	6.8	16.4	9.77	207	0.00	27.75	27.95	1.15	3450
F+6	19.2	54.4	0.38	0.26	12.26	0.99	6.8	17.4	7.57	141	0.00	29.44	30.38	0.89	2675
F+6	19.4	51.0	0.38	0.26	12.36	0.99	6.8	16.4	7.62	143	0.00	27.75	28.51	0.90	2692
F+8	25.9	75.4	0.41	0.28	15.30	1.16	7.4	32.5	8.92	197	0.00	50.25	53.08	0.90	3401
F+8	26.2	69.7	0.41	0.28	15.48	1.17	7.5	30.4	9.00	200	0.00	46.85	49.11	0.91	3430
F+10	33.7	91.2	0.45	0.31	18.16	1.31	8.0	51.2	10.06	256	0.00	73.16	78.92	0.84	4211
F+10	32.8	80.7	0.45	0.31	17.66	1.29	8.0	44.1	9.87	246	0.00	63.50	67.63	0.83	4131
Rill 5	slope = 7.28 %														
R+0	2.7	47.7	0.25	0.17	2.63	0.45	5.7	2.2	3.21	32	5.92	0.00	0.00	0.85	813
R+2	10.6	70.9	0.44	0.30	5.84	0.66	6.3	12.5	4.70	64	5.24	17.59	16.36	0.41	2072
R+2	10.3	59.3	0.44	0.30	5.68	0.65	6.3	10.2	4.63	63	5.24	13.36	12.71	0.41	2040
R+4	18.2	65.3	0.42	0.29	10.50	0.86	7.6	19.8	6.13	114	4.23	25.85	28.12	0.59	2577
R+4	17.6	57.2	0.42	0.29	10.18	0.85	7.6	16.8	6.06	112	4.23	21.31	23.49	0.58	2547
R+6	26.0	55.0	0.41	0.28	15.36	1.13	8.2	23.8	8.05	186	3.84	29.57	32.49	0.81	3305
R+6	24.9	76.1	0.41	0.28	14.75	1.09	8.2	31.6	7.77	177	3.84	40.53	44.16	0.78	3188
R+8	29.4	123.7	0.44	0.30	16.19	1.37	10.7	60.5	9.76	325	2.74	62.22	67.26	0.86	4300
R+8	30.9	133.2	0.44	0.30	17.02	1.42	10.7	68.5	10.12	343	2.74	70.82	76.91	0.89	4457
R+10	43.9	175.7	0.52	0.36	20.48	1.37	12.6	128.5	9.76	383	2.20	114.95	134.02	0.61	5082
R+10	40.7	186.8	0.52	0.36	19.01	1.30	12.6	126.8	9.26	354	2.20	113.41	133.98	0.58	4823

RILL DATA ANALYSIS SOIL: ZAHL DATE: JULY 13, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 7.28 %														
F+2	7.7	97.8	0.33	0.23	5.68	0.56	8.4	12.6	4.01	67	0.00	17.23	18.44	0.63	1324
F+2	8.1	66.8	0.33	0.23	5.98	0.59	8.5	9.1	4.18	72	0.00	12.31	12.72	0.65	1381
F+4	16.1	101.7	0.42	0.29	9.31	0.83	9.1	27.3	5.90	130	0.00	34.54	37.49	0.57	2481
F+4	16.5	116.8	0.42	0.29	9.51	0.84	9.1	32.0	5.99	133	0.00	40.33	44.58	0.58	2520
F+6	24.8	104.7	0.44	0.30	13.70	0.69	18.8	43.3	4.89	202	0.00	26.50	28.83	0.43	2155
F+6	23.9	98.0	0.44	0.30	13.18	0.66	18.7	39.0	4.73	192	0.00	23.96	25.90	0.41	2082
F+6	24.8	104.7	0.44	0.30	13.70	1.23	8.6	43.3	8.73	222	0.00	57.61	61.95	0.77	3845
F+6	23.9	98.0	0.44	0.30	13.18	1.19	8.6	39.0	8.49	212	0.00	52.09	55.65	0.75	3741
F+8	32.5	118.1	0.47	0.32	16.76	1.41	8.8	63.9	10.03	279	0.00	83.15	91.27	0.77	4719
F+8	33.8	112.3	0.47	0.32	17.43	1.44	8.9	63.2	10.29	292	0.00	81.88	89.21	0.79	4844
F+10	38.7	121.6	0.58	0.40	16.20	1.38	8.8	78.5	9.80	269	0.00	102.56	117.24	0.50	5692
F+10	41.1	108.7	0.58	0.40	17.18	1.43	8.9	74.4	10.20	287	0.00	96.52	107.99	0.51	5921
Rill 6	slope = 7.07 %														
R+0	2.9	39.2	0.22	0.15	3.12	0.50	5.7	1.9	3.46	36	5.92	0.00	0.00	1.19	792
R+2	9.8	48.0	0.38	0.26	6.27	0.82	6.3	7.9	5.70	85	5.24	9.09	11.58	0.67	2233
R+2	9.8	48.5	0.38	0.26	6.23	0.82	6.3	7.9	5.68	85	5.24	9.13	11.57	0.67	2224
R+4	17.2	84.0	0.44	0.30	9.49	1.08	7.6	24.1	7.46	153	4.23	32.40	35.42	0.65	3384
R+4	16.9	84.7	0.44	0.30	9.30	1.06	7.6	23.8	7.37	151	4.23	31.99	34.95	0.65	3342
R+6	23.9	68.0	0.44	0.30	13.20	1.26	8.2	27.1	8.72	210	3.84	34.20	37.32	0.77	3958
R+6	24.2	120.1	0.44	0.30	13.32	1.26	8.2	48.4	8.75	211	3.84	64.04	70.42	0.77	3971
R+8	30.4	142.7	0.41	0.28	17.97	1.39	10.1	72.2	9.62	299	2.96	79.40	87.81	0.97	4066
R+8	33.2	128.5	0.41	0.28	19.63	1.48	10.1	71.0	10.24	329	2.96	78.05	85.41	1.04	4329
R+10	36.7	217.7	0.48	0.33	18.53	1.26	12.6	133.0	8.72	323	2.20	119.03	145.35	0.64	4315
R+10	41.0	163.0	0.48	0.33	20.72	1.37	12.6	111.3	9.45	365	2.20	99.29	113.61	0.70	4677
F+2	6.8	42.4	0.28	0.19	5.88	0.57	8.8	4.8	3.97	69	0.00	6.30	6.31	0.86	1146
F+2	6.7	45.6	0.28	0.19	5.77	0.56	8.7	5.1	3.91	67	0.00	6.68	6.71	0.85	1128
F+4	15.3	102.3	0.41	0.28	9.03	0.79	9.7	26.0	5.45	123	0.00	30.78	33.42	0.55	2305
F+4	15.0	96.7	0.41	0.28	8.90	0.78	9.7	24.2	5.40	121	0.00	28.78	31.05	0.55	2281
F+6	25.0	111.5	0.46	0.32	13.17	0.97	11.3	46.4	6.74	197	0.00	47.17	52.00	0.54	3195
F+6	24.0	96.2	0.46	0.32	12.68	0.95	11.2	38.5	6.54	187	0.00	39.42	42.67	0.53	3102
F+6	25.0	111.5	0.46	0.32	13.17	1.00	10.3	46.4	6.90	186	0.00	51.71	57.50	0.55	3272
F+6	24.0	96.2	0.46	0.32	12.68	0.97	10.3	38.5	6.70	177	0.00	43.15	47.04	0.54	3176
F+8	32.3	103.8	0.50	0.34	15.67	1.14	10.5	55.9	7.88	232	0.00	60.94	67.38	0.54	4065
F+8	32.2	102.4	0.50	0.34	15.63	1.14	10.5	55.0	7.87	232	0.00	60.00	66.21	0.54	4059
F+10	39.7	126.2	0.59	0.41	16.32	1.18	10.6	83.5	8.13	245	0.00	90.58	107.09	0.40	4947
F+10	40.9	101.7	0.59	0.41	16.82	1.20	10.6	69.3	8.32	254	0.00	74.89	84.53	0.41	5060

RILL DATA ANALYSIS SOIL: PIERRE DATE: JULY 31, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 92.26 Kinematic Viscosity = 0.860 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 38.33 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 6.29 %														
R+0	3.7	52.1	0.23	0.16	3.95	0.67	5.5	3.3	4.15	43	4.71	1.87	0.00	1.33	1238
R+2	11.3	28.6	0.39	0.27	7.06	0.97	6.1	5.4	5.96	82	4.18	5.66	7.51	0.67	3017
R+2	15.1	24.8	0.39	0.27	9.40	1.14	6.1	6.3	7.01	104	4.18	7.21	10.45	0.78	3546
R+4	18.0	19.6	0.45	0.31	9.69	1.16	6.7	5.9	7.12	118	3.74	6.00	9.06	0.60	4160
R+6	22.1	41.3	0.45	0.31	11.91	1.29	7.3	15.2	7.95	151	3.38	19.68	22.82	0.67	4642
R+6	20.8	55.0	0.45	0.31	11.21	1.25	7.3	19.1	7.70	144	3.38	25.56	28.91	0.65	4497
R+8	27.4	47.8	0.47	0.32	14.13	1.20	7.9	21.8	7.39	147	3.07	27.46	30.66	0.57	4505
R+8	27.8	58.6	0.47	0.32	14.35	1.21	7.9	27.1	7.45	149	3.07	34.96	38.99	0.57	4543
R+10	32.9	128.3	0.45	0.31	17.60	1.36	8.5	70.4	8.37	191	2.80	88.85	108.34	0.69	4932
R+10	31.5	140.5	0.45	0.31	16.96	1.33	8.5	73.7	8.19	185	2.80	93.07	115.34	0.69	4781
F+2	4.4	39.0	0.25	0.17	4.24	0.63	5.5	2.8	3.89	39	0.00	5.73	5.95	1.06	1261
F+2	4.3	29.3	0.25	0.17	4.17	0.63	5.5	2.1	3.85	38	0.00	4.26	4.38	1.05	1249
F+4	11.6	90.3	0.32	0.22	8.78	0.86	8.6	17.4	5.30	96	0.00	22.63	24.96	0.88	2203
F+4	12.4	74.1	0.32	0.22	9.38	0.89	8.9	15.3	5.47	105	0.00	19.10	20.65	0.91	2270
F+6	16.4	69.4	0.33	0.23	12.06	1.05	9.6	19.0	6.47	145	0.00	22.02	23.60	1.01	2771
F+6	18.7	77.0	0.33	0.23	13.72	1.14	10.1	23.9	7.00	172	0.00	26.44	28.47	1.09	2996
F+6	16.4	69.4	0.33	0.23	12.06	1.02	6.8	19.0	6.30	100	0.00	30.84	34.21	0.98	2697
F+6	18.7	77.0	0.33	0.23	13.72	1.00	8.6	23.9	6.18	121	0.00	31.10	34.65	0.96	2645
F+8	27.2	92.7	0.40	0.27	16.48	1.12	9.2	42.0	6.92	155	0.00	50.74	59.20	0.74	3594
F+8	26.2	102.1	0.40	0.27	15.90	1.10	9.1	44.6	6.74	148	0.00	54.22	64.55	0.72	3500
F+10	32.7	68.6	0.39	0.27	20.35	1.31	9.6	37.4	8.05	202	0.00	43.41	48.01	0.90	4074
F+10	33.4	85.1	0.39	0.27	20.76	1.33	9.6	47.3	8.17	207	0.00	54.74	62.15	0.91	4136
Rill 2	slope = 6.58 %														
R+0	3.7	52.1	0.23	0.16	3.93	0.53	6.1	3.3	3.41	35	4.18	1.74	0.00	1.09	979
R+2	10.9	11.4	0.42	0.29	6.29	0.80	6.1	2.1	5.15	66	4.18	0.00	1.51	0.50	2684
R+2	14.1	14.9	0.42	0.29	8.17	0.96	6.1	3.5	6.18	87	4.18	2.22	4.25	0.60	3221
R+4	12.1	17.9	0.36	0.25	8.16	0.95	6.7	3.6	6.12	94	3.74	2.23	4.06	0.80	2732
R+4	14.6	18.4	0.36	0.25	9.86	1.07	6.7	4.5	6.89	112	3.74	3.69	5.69	0.90	3077
R+6	17.5	22.6	0.48	0.33	8.84	0.96	7.3	6.6	6.18	104	3.38	6.62	7.18	0.46	3681
R+6	18.3	23.0	0.48	0.33	9.23	0.99	7.3	7.0	6.37	109	3.38	7.24	7.89	0.47	3796
R+8	24.6	29.0	0.52	0.36	11.47	1.12	7.9	11.9	7.20	141	3.07	13.56	13.94	0.45	4643
R+8	23.7	27.7	0.52	0.36	11.07	1.09	7.9	11.0	7.02	136	3.07	12.28	12.67	0.44	4530
R+10	30.8	33.5	0.54	0.37	13.86	1.27	8.5	17.2	8.16	184	2.80	19.58	20.19	0.48	5469
R+10	31.7	39.8	0.54	0.37	14.16	1.29	8.5	21.0	8.28	188	2.80	24.56	25.00	0.48	5578

RILL DATA ANALYSIS SOIL: PIERRE DATE: JULY 31, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 6.58 %														
F+2	4.1	4.3	0.27	0.19	3.65	0.56	5.9	0.3	3.60	37	0.00	0.56	0.00	0.84	1204
F+2	4.7	4.5	0.27	0.19	4.18	0.61	6.1	0.4	3.93	44	0.00	0.63	0.00	0.92	1316
F+4	12.2	11.7	0.35	0.24	8.45	0.90	8.2	2.4	5.80	106	0.00	3.20	3.24	0.80	2519
F+4	12.4	12.7	0.35	0.24	8.57	0.91	8.3	2.6	5.86	108	0.00	3.51	3.56	0.81	2545
F+6	17.5	16.7	0.45	0.31	9.45	0.98	8.4	4.9	6.29	122	0.00	6.45	6.59	0.53	3510
F+6	15.3	15.3	0.45	0.31	8.27	0.89	8.2	3.9	5.71	104	0.00	5.28	5.38	0.48	3190
F+6	17.5	16.7	0.45	0.31	9.45	0.89	6.5	4.9	5.73	83	0.00	8.34	8.60	0.48	3201
F+6	15.3	15.3	0.45	0.31	8.27	0.81	6.4	3.9	5.20	71	0.00	6.75	6.94	0.44	2906
F+8	24.4	25.0	0.45	0.31	13.17	1.12	6.8	10.2	7.21	121	0.00	16.70	17.44	0.60	4025
F+8	23.2	24.3	0.45	0.31	12.51	1.08	6.7	9.4	6.97	114	0.00	15.56	16.24	0.58	3890
F+10	31.9	30.6	0.48	0.33	16.12	1.27	7.0	16.3	8.21	151	0.00	25.99	27.50	0.61	4889
F+10	29.7	32.8	0.48	0.33	14.99	1.22	6.9	16.2	7.84	139	0.00	26.20	27.86	0.58	4670
Rill 3	slope = 7.12 %														
R+0	3.6	42.2	0.22	0.15	4.00	0.58	6.1	2.5	4.04	46	4.18	0.44	0.00	1.43	1015
R+2	11.4	30.0	0.43	0.30	6.46	0.72	6.7	5.7	5.02	70	3.74	5.72	0.00	0.46	2473
R+2	14.9	25.3	0.43	0.30	8.41	0.85	6.7	6.3	5.92	89	3.74	6.66	8.37	0.54	2920
R+4	17.9	57.1	0.48	0.33	9.03	0.85	6.7	17.0	5.92	89	3.74	24.41	23.85	0.44	3259
R+4	18.4	37.7	0.48	0.33	9.29	0.87	6.7	11.6	6.06	92	3.74	15.41	16.27	0.45	3336
R+6	22.6	20.7	0.44	0.30	12.46	1.07	7.3	7.8	7.46	137	3.38	8.47	11.14	0.65	3761
R+6	23.0	50.7	0.44	0.30	12.67	1.08	7.3	19.4	7.53	139	3.38	26.10	28.94	0.66	3796
R+8	29.0	93.2	0.54	0.37	13.01	1.32	7.9	45.0	9.19	204	3.07	59.94	67.44	0.54	5691
R+8	27.7	67.6	0.54	0.37	12.45	1.29	7.9	31.2	8.98	197	3.07	40.68	45.09	0.52	5562
R+10	33.5	110.7	0.48	0.33	16.91	1.49	8.5	61.8	10.38	264	2.80	77.55	88.05	0.77	5713
R+10	39.8	108.5	0.48	0.33	20.12	1.57	8.5	72.0	10.94	285	2.80	90.90	104.20	0.81	6020
F+2	4.3	52.7	0.23	0.16	4.58	0.76	4.8	3.8	5.28	54	0.00	8.83	9.16	1.70	1392
F+2	4.5	51.2	0.23	0.16	4.77	0.77	4.9	3.9	5.39	56	0.00	8.78	9.09	1.73	1422
F+4	11.7	48.8	0.32	0.22	8.87	1.08	6.3	9.5	7.52	120	0.00	16.81	17.52	1.25	2759
F+4	12.7	65.2	0.32	0.22	9.62	1.13	6.5	13.8	7.84	132	0.00	23.53	24.85	1.30	2877
F+6	16.7	96.5	0.36	0.25	11.28	1.22	6.9	26.9	8.53	160	0.00	43.09	47.19	1.12	3522
F+6	15.3	101.0	0.36	0.25	10.30	1.17	6.7	25.7	8.13	143	0.00	42.69	47.05	1.07	3356
F+6	16.7	96.5	0.36	0.25	11.28	1.07	7.9	26.9	7.48	149	0.00	37.85	41.74	0.98	3086
F+6	15.3	101.0	0.36	0.25	10.30	1.02	7.6	25.7	7.09	133	0.00	37.53	41.72	0.93	2927
F+8	25.0	81.1	0.36	0.25	16.83	1.36	9.2	33.8	9.46	248	0.00	40.64	43.69	1.24	3903
F+8	24.3	94.3	0.36	0.25	16.41	1.34	9.2	38.3	9.31	240	0.00	46.43	50.58	1.22	3842
F+10	30.6	108.7	0.41	0.28	18.11	1.39	10.4	55.5	9.66	287	0.00	59.41	66.01	0.98	4539
F+10	32.8	100.9	0.41	0.28	19.43	1.22	10.8	55.2	8.48	246	0.00	56.93	64.49	0.86	3987

RILL DATA ANALYSIS SOIL: PIERRE DATE: JULY 31, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 4	slope = 7.08 %														
R+0	3.3	33.6	0.21	0.15	3.80	0.50	5.5	1.9	3.46	33	4.71	0.00	0.00	1.29	852
R+2	10.6	34.0	0.42	0.29	6.11	0.86	6.1	6.0	5.96	82	4.18	6.73	8.10	0.57	2885
R+2	14.0	25.6	0.42	0.29	8.07	1.00	6.1	6.0	6.93	103	4.18	6.67	9.35	0.67	3355
R+4	15.1	26.2	0.43	0.30	8.52	1.04	6.7	6.6	7.21	120	3.74	7.18	9.75	0.66	3572
R+4	16.1	53.4	0.43	0.30	9.07	1.07	6.7	14.3	7.41	125	3.74	19.96	22.01	0.68	3675
R+6	21.5	22.2	0.47	0.32	11.11	1.18	7.3	8.0	8.18	158	3.38	8.74	11.35	0.63	4430
R+6	20.4	28.0	0.47	0.32	10.55	1.16	7.3	9.5	8.04	154	3.38	11.09	13.57	0.62	4355
R+8	25.3	65.6	0.48	0.33	12.81	1.15	7.9	27.7	7.97	165	3.07	35.74	38.67	0.59	4410
R+8	26.2	64.0	0.48	0.33	13.22	1.17	7.9	27.9	8.11	169	3.07	36.03	39.05	0.60	4486
R+10	17.2	90.2	0.43	0.30	9.70	0.96	8.5	25.9	6.65	135	2.80	30.84	32.05	0.61	3298
R+10	29.8	134.5	0.43	0.30	16.83	1.38	8.5	66.9	9.56	233	2.80	84.18	96.40	0.88	4740
F+2	4.5	92.9	0.22	0.15	4.99	0.74	5.9	7.0	5.13	63	0.00	13.16	13.95	1.80	1301
F+2	4.0	93.6	0.22	0.15	4.46	0.70	5.6	6.3	4.85	55	0.00	12.51	13.29	1.70	1231
F+4	11.6	84.3	0.30	0.21	9.42	0.89	9.3	16.4	6.15	130	0.00	19.63	20.98	1.16	2128
F+6	11.0	82.0	0.30	0.21	8.93	0.99	7.7	15.1	6.88	128	0.00	21.81	23.20	1.30	2379
F+6	16.8	57.1	0.33	0.23	12.38	1.08	9.9	16.0	7.45	186	0.00	17.99	18.81	1.16	2835
F+8	16.8	57.1	0.33	0.23	12.38	1.21	6.4	16.0	8.39	144	0.00	27.76	29.43	1.31	3194
F+8	26.3	128.3	0.35	0.24	18.21	0.95	17.1	56.2	6.56	266	0.00	36.43	40.93	0.91	2648
F+10	30.9	115.1	0.42	0.29	17.82	0.93	17.1	59.2	6.44	258	0.00	38.42	43.64	0.62	3118
F+10	31.2	122.3	0.42	0.29	18.00	0.94	17.1	63.5	6.50	262	0.00	41.22	47.22	0.63	3146
Rill 5	slope = 6.51 %														
R+0	3.5	39.9	0.19	0.13	4.60	0.68	5.5	2.3	4.35	46	4.71	0.01	0.00	2.16	1011
R+2	11.0	11.0	0.39	0.27	6.82	0.90	6.7	2.0	5.74	85	3.74	0.00	1.24	0.64	2808
R+2	15.7	15.7	0.39	0.27	9.74	1.02	6.7	4.1	6.47	102	3.74	3.03	4.07	0.72	3165
R+4	15.3	15.3	0.42	0.29	8.83	0.95	7.3	3.9	6.05	100	3.38	2.54	3.08	0.58	3186
R+4	18.1	18.1	0.42	0.29	10.46	1.07	7.3	5.5	6.79	119	3.38	4.92	5.65	0.65	3576
R+6	23.1	23.1	0.40	0.27	14.03	1.32	7.9	8.9	8.41	178	3.07	9.44	10.48	0.89	4218
R+6	24.7	24.7	0.40	0.27	14.99	1.38	7.9	10.2	8.79	191	3.07	11.19	12.21	0.93	4410
R+8	27.2	27.2	0.41	0.28	16.00	1.40	8.5	12.3	8.92	210	2.80	13.20	14.01	0.89	4608
R+8	29.5	29.5	0.41	0.28	17.44	1.47	8.5	14.5	9.37	226	2.80	16.03	16.80	0.95	4815
R+10	32.6	32.6	0.50	0.34	15.83	1.39	9.2	17.7	8.86	222	2.57	18.98	19.24	0.60	5552
R+10	38.2	38.2	0.50	0.34	18.56	1.52	9.2	24.4	9.68	254	2.57	27.03	27.35	0.66	6071

RILL DATA ANALYSIS SOIL: PIERRE DATE: JULY 31, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 6.51 %														
F+2	5.3	5.3	0.26	0.18	4.95	0.68	6.4	0.5	4.32	53	0.00	0.82	0.00	1.09	1409
F+2	5.7	5.7	0.26	0.18	5.31	0.71	6.5	0.5	4.50	58	0.00	0.92	0.00	1.13	1467
F+4	13.7	13.7	0.32	0.22	10.39	0.97	9.1	3.1	6.16	128	0.00	3.84	3.89	1.02	2474
F+4	13.4	13.4	0.32	0.22	10.18	0.95	9.0	3.0	6.07	125	0.00	3.70	3.75	1.01	2437
F+6	17.8	17.8	0.34	0.23	12.67	1.12	9.4	5.3	7.12	165	0.00	6.22	6.32	1.05	3037
F+6	20.3	20.3	0.34	0.23	14.52	1.13	10.7	6.9	7.18	189	0.00	7.19	7.32	1.06	3061
F+6	17.8	17.8	0.34	0.23	12.67	1.04	10.5	5.3	6.61	165	0.00	5.56	5.65	0.97	2819
F+6	20.3	20.3	0.34	0.23	14.52	1.15	10.8	6.9	7.30	196	0.00	7.11	7.24	1.07	3114
F+8	28.1	28.1	0.41	0.28	16.60	1.26	11.1	13.1	8.03	233	0.00	13.15	13.53	0.81	4130
F+8	27.5	27.5	0.41	0.28	16.30	1.24	11.0	12.6	7.93	227	0.00	12.72	13.09	0.80	4076
F+10	37.8	37.8	0.54	0.37	17.00	1.28	11.1	23.9	8.17	240	0.00	23.80	25.07	0.48	5531
F+10	36.7	36.7	0.54	0.37	16.47	1.25	11.1	22.4	7.99	231	0.00	22.49	23.66	0.47	5410
Rill 6	slope = 6.31 %														
R+0	3.1	36.9	0.16	0.11	4.67	0.53	5.5	1.9	3.27	30	4.71	0.00	0.00	2.15	682
R+2	10.8	28.9	0.37	0.25	7.10	0.90	6.1	5.2	5.56	74	4.18	5.32	5.06	0.69	2660
R+2	15.1	21.0	0.37	0.25	9.92	1.13	6.1	5.3	6.98	104	4.18	5.45	7.27	0.87	3340
R+4	18.7	20.8	0.44	0.30	10.32	1.09	6.7	6.5	6.73	108	3.74	6.99	8.12	0.59	3831
R+4	18.2	20.0	0.44	0.30	10.04	1.07	6.7	6.1	6.61	105	3.74	6.33	7.49	0.58	3761
R+6	22.9	23.8	0.41	0.28	13.56	1.31	7.3	9.1	8.09	155	3.38	10.41	11.87	0.82	4291
R+6	22.3	21.4	0.41	0.28	13.21	1.29	7.3	8.0	7.97	152	3.38	8.72	10.32	0.81	4225
R+8	28.0	22.0	0.46	0.32	14.77	1.36	8.5	10.3	8.40	192	2.80	10.57	11.95	0.67	4998
R+8	28.8	23.0	0.46	0.32	15.17	1.38	8.5	11.0	8.52	196	2.80	11.54	12.90	0.68	5071
R+10	34.3	59.3	0.50	0.34	16.65	1.45	8.5	34.0	8.95	211	2.80	41.37	42.30	0.61	5792
R+10	36.7	43.4	0.50	0.34	17.80	1.51	8.5	26.5	9.32	224	2.80	31.71	32.68	0.63	6031
F+2	3.7	3.7	0.27	0.19	3.32	0.58	3.8	0.2	3.61	24	0.00	0.67	0.00	0.84	1260
F+2	4.3	12.9	0.27	0.19	3.82	0.64	4.0	0.9	3.93	29	0.00	2.55	0.00	0.92	1373
F+4	12.6	34.9	0.34	0.24	8.92	1.01	5.9	7.3	6.21	85	0.00	13.77	14.40	0.90	2757
F+4	12.8	59.4	0.34	0.24	9.05	1.01	6.0	12.7	6.26	86	0.00	23.60	25.52	0.90	2778
F+6	18.0	62.1	0.39	0.27	11.17	1.05	7.5	18.6	6.46	113	0.00	27.72	30.29	0.72	3260
F+6	20.1	55.2	0.39	0.27	12.49	1.13	7.6	18.5	6.96	129	0.00	26.85	28.97	0.78	3510
F+6	18.0	62.1	0.39	0.27	11.17	1.02	9.0	18.6	6.31	132	0.00	22.92	24.70	0.71	3186
F+6	20.1	55.2	0.39	0.27	12.49	1.01	9.3	18.5	6.21	133	0.00	22.11	23.81	0.69	3134
F+8	29.4	62.5	0.43	0.30	16.61	1.24	9.7	30.7	7.66	190	0.00	35.02	38.19	0.70	4260
F+8	28.4	93.2	0.43	0.30	16.01	1.21	9.7	44.1	7.46	182	0.00	50.64	58.00	0.69	4149
F+10	34.9	122.0	0.53	0.36	15.96	1.21	9.7	70.9	7.44	181	0.00	81.49	103.41	0.45	5102
F+10	34.9	86.7	0.53	0.36	15.98	1.21	9.7	50.5	7.45	181	0.00	58.00	67.97	0.45	5108

RILL DATA ANALYSIS SOIL: WILLIAMS DATE: AUGUST 3, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 99.00 Kinematic Viscosity = 0.916 x 10^{-6} m^2/s

Velocity Factor = 0.687 D_i = 48.91 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.74 %														
R+0	3.3	15.5	0.12	0.08	6.56	0.69	8.4	0.9	3.20	48	3.65	0.00	0.00	3.61	635
R+2	10.1	8.0	0.22	0.15	11.34	0.87	12.0	1.3	4.04	96	2.31	0.00	0.40	1.48	1406
R+2	10.6	7.7	0.22	0.15	11.96	0.90	12.0	1.4	4.17	101	2.31	0.00	0.52	1.53	1455
R+4	17.3	11.2	0.27	0.18	15.71	1.03	14.4	3.2	4.78	149	1.79	0.71	1.67	1.13	2069
R+4	16.4	11.3	0.27	0.18	14.87	0.98	14.4	3.1	4.55	138	1.79	0.59	1.46	1.08	1969
R+6	21.7	24.7	0.31	0.21	16.99	1.10	14.4	9.0	5.10	164	1.79	5.12	5.08	0.90	2558
R+6	21.0	21.9	0.31	0.21	16.43	1.07	14.4	7.7	4.96	158	1.79	4.12	4.21	0.88	2488
R+8	37.1	21.2	0.37	0.25	24.29	1.33	14.4	13.1	6.17	218	1.79	8.31	8.49	0.77	3691
R+8	35.9	22.4	0.37	0.25	23.52	1.30	14.4	13.4	6.03	211	1.79	8.52	8.58	0.75	3608
R+10	38.0	20.2	0.40	0.27	23.04	1.28	15.0	12.8	5.94	215	1.68	7.79	7.90	0.63	3840
R+10	39.1	15.4	0.40	0.27	23.74	1.31	15.0	10.0	6.08	222	1.68	5.75	6.23	0.65	3930
R+12	44.6	18.1	0.41	0.28	26.41	1.08	20.4	13.5	5.01	226	1.02	6.32	6.09	0.51	3321
R+12	44.8	16.3	0.41	0.28	26.51	1.11	20.4	12.1	5.15	236	1.02	5.59	5.56	0.52	3413
F+2	5.6	1.3	0.15	0.10	9.01	0.63	12.3	0.1	2.94	61	0.00	0.11	0.11	2.22	713
F+2	2.7	0.8	0.15	0.10	4.29	0.56	7.7	0.0	2.59	32	0.00	0.05	0.05	1.95	628
F+4	14.4	3.8	0.29	0.20	12.04	0.65	18.5	0.9	3.01	96	0.00	0.55	0.55	0.61	1412
F+4	14.4	5.1	0.29	0.20	12.01	0.65	18.5	1.2	3.01	96	0.00	0.73	0.73	0.61	1409
F+6	19.4	11.0	0.34	0.23	13.85	0.72	19.2	3.6	3.35	116	0.00	2.06	2.09	0.49	1841
F+6	19.3	14.4	0.34	0.23	13.79	0.72	19.2	4.6	3.34	116	0.00	2.69	2.74	0.49	1834
F+6	19.4	11.0	0.34	0.23	13.85	1.16	10.2	3.6	5.38	126	0.00	3.89	3.94	0.79	2960
F+6	19.3	14.4	0.34	0.23	13.79	1.16	10.1	4.6	5.40	125	0.00	5.11	5.20	0.79	2970
F+8	26.1	21.5	0.37	0.25	17.12	1.14	12.9	9.4	5.29	156	0.00	8.07	8.32	0.66	3166
F+8	26.2	13.2	0.37	0.25	17.19	1.14	12.9	5.8	5.30	156	0.00	4.95	5.04	0.66	3173
F+10	34.4	13.5	0.40	0.27	20.84	1.25	14.4	7.7	5.78	198	0.00	5.98	6.10	0.61	3736
F+10	34.9	14.8	0.40	0.27	21.18	1.26	14.4	8.6	5.84	202	0.00	6.62	6.76	0.62	3778
F+12	42.1	15.9	0.41	0.28	24.93	1.41	15.0	11.2	6.55	249	0.00	8.26	8.45	0.66	4345
F+12	42.2	13.3	0.41	0.28	24.98	1.41	15.0	9.4	6.56	250	0.00	6.94	7.08	0.66	4350
Rill 2	slope = 5.00 %														
R+0	3.0	20.8	0.12	0.08	5.91	0.55	8.4	1.0	2.69	37	3.65	0.00	0.37	3.04	506
R+2	9.9	13.4	0.25	0.17	9.56	0.75	12.0	2.2	3.67	84	2.31	0.00	1.33	0.98	1418
R+2	10.3	18.5	0.25	0.17	9.89	0.78	12.0	3.2	3.82	89	2.31	0.63	1.98	1.02	1475
R+4	16.9	36.3	0.34	0.23	12.08	0.91	12.0	10.2	4.45	112	2.31	7.17	7.23	0.65	2321
R+4	17.2	44.8	0.34	0.23	12.29	0.92	12.0	12.9	4.50	113	2.31	9.59	9.21	0.66	2346

RILL DATA ANALYSIS SOIL: WILLIAMS DATE: AUGUST 3, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 5.00 %														
R+6	21.4	26.8	0.34	0.23	15.30	1.14	12.0	9.6	5.58	157	2.31	6.57	7.36	0.82	2907
R+6	21.1	25.0	0.34	0.23	15.08	1.13	12.0	8.8	5.53	154	2.31	5.84	6.72	0.81	2882
R+8	35.6	21.6	0.40	0.27	21.60	1.49	12.0	12.8	7.29	234	2.31	9.54	10.49	0.77	4470
R+8	34.5	31.4	0.40	0.27	20.93	1.46	12.0	18.1	7.14	227	2.31	14.40	14.90	0.76	4380
R+10	38.7	22.7	0.42	0.29	22.33	1.53	12.0	14.6	7.49	243	2.31	11.24	12.09	0.72	4820
R+10	37.1	25.5	0.42	0.29	21.44	1.48	12.0	15.8	7.24	232	2.31	12.30	12.99	0.70	4662
R+12	45.0	38.7	0.44	0.30	24.80	1.14	18.0	29.0	5.58	235	1.27	16.65	16.78	0.49	3762
R+12	44.5	47.5	0.44	0.30	24.56	1.25	18.0	35.2	6.13	271	1.27	20.49	20.81	0.54	4137
F+2	5.8	4.2	0.19	0.13	7.44	0.58	12.4	0.4	2.83	58	0.00	0.36	0.00	1.33	824
F+2	2.9	2.0	0.19	0.13	3.77	0.42	8.7	0.1	2.07	26	0.00	0.12	0.00	0.97	602
F+4	14.4	19.0	0.31	0.21	11.23	0.79	13.6	4.6	3.85	102	0.00	3.72	3.80	0.68	1828
F+4	14.4	13.4	0.31	0.21	11.24	0.79	13.6	3.2	3.85	102	0.00	2.62	2.66	0.68	1829
F+6	19.8	14.0	0.38	0.26	12.63	0.80	15.0	4.6	3.92	116	0.00	3.41	3.48	0.46	2285
F+6	19.7	17.5	0.38	0.26	12.55	0.80	15.0	5.7	3.91	115	0.00	4.26	4.37	0.46	2275
F+6	19.8	14.0	0.38	0.26	12.63	1.32	6.9	4.6	6.44	111	0.00	7.48	7.64	0.76	3754
F+6	19.7	17.5	0.38	0.26	12.55	1.31	6.9	5.7	6.42	110	0.00	9.32	9.57	0.76	3739
F+8	26.0	18.7	0.39	0.27	16.17	1.52	7.2	8.1	7.43	144	0.00	12.55	12.92	0.83	4440
F+8	24.9	23.9	0.39	0.27	15.52	1.48	7.1	10.0	7.26	138	0.00	15.56	16.15	0.81	4339
F+10	33.2	24.4	0.40	0.27	20.12	1.71	7.5	13.5	8.35	179	0.00	20.03	20.82	0.89	5121
F+10	34.5	24.7	0.40	0.27	20.90	1.74	7.6	14.2	8.51	186	0.00	20.81	21.65	0.90	5220
F+12	42.4	33.5	0.44	0.30	23.38	1.84	7.8	23.7	9.01	208	0.00	33.83	35.92	0.79	6074
F+12	42.8	27.1	0.44	0.30	23.61	1.85	7.8	19.3	9.05	210	0.00	27.50	28.85	0.79	6103
Rill 3	slope = 5.38 %														
R+0	3.0	23.3	0.12	0.08	5.97	0.45	7.2	1.2	2.37	26	4.39	0.00	0.00	2.68	414
R+2	10.2	16.3	0.27	0.19	9.11	0.68	10.2	2.8	3.58	68	2.86	0.15	1.72	0.83	1385
R+2	10.1	27.3	0.27	0.19	9.12	0.66	10.2	4.6	3.47	65	2.86	2.17	2.70	0.81	1337
R+4	17.6	27.2	0.37	0.25	11.55	0.79	13.2	8.0	4.16	111	2.03	4.71	5.27	0.52	2192
R+4	16.4	25.4	0.37	0.25	10.74	0.75	13.2	6.9	3.95	103	2.03	3.81	4.36	0.49	2081
R+6	21.9	30.9	0.40	0.27	13.31	0.89	13.2	11.3	4.69	133	2.03	7.49	8.05	0.50	2670
R+6	21.8	34.0	0.40	0.27	13.20	0.88	13.2	12.3	4.61	129	2.03	8.35	8.74	0.49	2625
R+8	37.2	33.1	0.41	0.28	22.01	1.38	13.8	20.5	7.27	268	1.90	14.63	15.74	0.73	4244
R+8	36.9	30.7	0.41	0.28	21.81	1.37	13.8	18.8	7.21	265	1.90	13.27	14.39	0.73	4213
R+10	38.7	42.8	0.46	0.32	20.39	1.27	14.4	27.6	6.69	246	1.79	19.49	20.46	0.54	4382
R+10	39.9	36.7	0.46	0.32	21.06	1.30	14.4	24.4	6.84	255	1.79	17.05	18.04	0.55	4485
R+12	45.5	50.2	0.49	0.34	22.52	1.27	14.4	38.1	6.69	246	1.79	27.60	28.88	0.47	4667
R+12	47.6	39.2	0.49	0.34	23.55	1.30	14.4	31.1	6.82	254	1.79	22.19	23.26	0.48	4760

RILL DATA ANALYSIS SOIL: WILLIAMS DATE: AUGUST 3, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 3	slope = 5.38 %														
F+2	5.9	13.1	0.17	0.12	8.39	0.80	8.3	1.3	4.24	72	0.00	1.71	1.72	2.49	1026
F+2	2.6	11.1	0.17	0.12	3.77	0.52	7.2	0.5	2.75	33	0.00	0.75	0.00	1.62	666
F+4	14.5	24.4	0.33	0.23	10.68	0.97	8.6	5.9	5.08	98	0.00	7.62	7.86	0.79	2388
F+4	14.3	20.5	0.33	0.23	10.52	0.95	8.6	4.9	5.03	96	0.00	6.33	6.49	0.78	2363
F+6	20.3	23.3	0.35	0.24	14.09	1.18	9.0	7.9	6.19	138	0.00	9.71	10.00	0.86	3087
F+6	20.3	23.1	0.35	0.24	14.09	1.18	9.0	7.8	6.19	138	0.00	9.64	9.93	0.86	3088
F+6	20.3	23.3	0.35	0.24	14.09	0.92	14.1	7.9	4.83	147	0.00	6.24	6.42	0.67	2406
F+6	20.3	23.1	0.35	0.24	14.09	0.92	14.1	7.8	4.83	147	0.00	6.20	6.37	0.67	2406
F+8	26.5	22.2	0.38	0.26	16.89	0.89	17.6	9.8	4.68	176	0.00	6.18	6.36	0.55	2535
F+8	26.4	19.8	0.38	0.26	16.88	0.89	17.6	8.7	4.68	176	0.00	5.51	5.65	0.55	2534
F+10	35.4	30.3	0.43	0.30	19.99	1.02	18.2	17.9	5.35	222	0.00	10.93	11.40	0.49	3275
F+10	35.9	21.3	0.43	0.30	20.27	1.03	18.2	12.7	5.40	227	0.00	7.77	8.00	0.50	3310
F+12	42.6	26.1	0.48	0.33	21.53	1.08	18.4	18.5	5.66	246	0.00	11.14	11.58	0.42	3870
Rill 4	slope = 4.70 %														
R+0	2.9	23.6	0.12	0.08	5.80	0.64	8.4	1.2	2.94	42	3.65	0.00	0.00	3.32	589
R+2	9.6	18.3	0.26	0.18	9.05	0.73	11.4	2.9	3.36	69	2.47	0.39	0.27	0.86	1414
R+2	10.0	16.6	0.26	0.18	9.37	0.76	11.4	2.8	3.50	74	2.47	0.21	0.82	0.89	1472
R+4	15.4	22.5	0.32	0.22	11.70	0.86	12.0	5.8	3.96	94	2.31	3.04	3.41	0.66	2069
R+4	15.7	22.5	0.32	0.22	11.88	0.87	12.0	5.9	4.01	96	2.31	3.14	3.57	0.67	2095
R+6	21.0	22.8	0.36	0.25	14.13	1.01	12.0	8.0	4.63	118	2.31	5.06	5.84	0.61	2718
R+6	20.2	26.2	0.36	0.25	13.62	1.03	12.0	8.8	4.74	123	2.31	5.86	6.60	0.62	2781
R+8	34.9	33.2	0.43	0.30	19.70	1.38	12.0	19.3	6.35	190	2.31	15.60	16.64	0.58	4451
R+8	34.5	32.3	0.43	0.30	19.49	1.40	12.0	18.6	6.44	194	2.31	14.89	15.99	0.59	4515
R+10	37.4	32.4	0.43	0.30	21.10	1.40	12.0	20.2	6.44	194	2.31	16.37	17.43	0.59	4515
R+10	36.8	29.2	0.43	0.30	20.79	1.39	12.0	17.9	6.39	192	2.31	14.29	15.39	0.59	4483
R+12	41.3	47.7	0.47	0.32	21.32	1.35	14.4	32.8	6.21	221	1.79	23.53	24.64	0.48	4759
R+12	43.8	38.3	0.47	0.32	22.63	1.35	14.4	28.0	6.21	221	1.79	19.82	20.80	0.48	4759
F+2	5.5	1.6	0.15	0.10	8.89	0.96	7.8	0.1	4.40	71	0.00	0.21	0.21	3.32	1076
F+2	2.6	0.8	0.15	0.10	4.19	0.58	6.4	0.0	2.68	28	0.00	0.06	0.06	2.03	656
F+4	13.4	6.4	0.37	0.25	8.81	0.95	7.8	1.4	4.37	71	0.00	2.03	2.05	0.54	2636
F+4	13.5	8.5	0.37	0.25	8.86	0.95	7.8	1.9	4.39	71	0.00	2.72	2.75	0.54	2647
F+6	19.1	11.4	0.36	0.25	12.87	1.24	8.3	3.6	5.68	112	0.00	4.82	4.89	0.74	3336
F+6	18.8	12.5	0.36	0.25	12.66	1.22	8.3	3.9	5.62	110	0.00	5.23	5.32	0.74	3299
F+6	19.1	11.4	0.36	0.25	12.87	1.01	10.1	3.6	4.63	99	0.00	3.98	4.06	0.61	2717
F+6	18.8	12.5	0.36	0.25	12.66	0.99	10.0	3.9	4.57	97	0.00	4.33	4.42	0.60	2685

RILL DATA ANALYSIS SOIL: WILLIAMS DATE: AUGUST 3, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 4.70 %														
F+8	24.5	16.0	0.41	0.28	14.53	1.09	10.4	6.5	5.03	117	0.00	6.95	7.15	0.51	3362
F+8	24.3	14.6	0.41	0.28	14.36	1.08	10.4	5.9	4.99	115	0.00	6.31	6.48	0.50	3335
F+10	32.0	17.3	0.43	0.30	18.04	0.93	13.2	9.2	4.25	115	0.00	7.75	8.08	0.39	2983
F+10	31.8	28.6	0.43	0.30	17.92	0.92	13.2	15.1	4.23	114	0.00	12.70	13.63	0.39	2967
F+12	39.8	20.5	0.46	0.32	21.01	1.05	13.4	13.6	4.84	141	0.00	11.28	11.86	0.39	3628
F+12	39.5	20.7	0.46	0.32	20.83	1.04	13.4	13.6	4.80	140	0.00	11.29	11.88	0.39	3603
Rill 5	slope = 5.20 %														
R+0	3.5	24.0	0.12	0.08	6.89	0.83	8.4	1.4	4.22	72	3.65	0.00	0.00	4.77	764
R+2	9.6	12.2	0.22	0.15	10.45	1.01	9.6	1.9	5.14	111	3.09	0.00	0.66	1.77	1681
R+2	9.8	11.4	0.22	0.15	10.77	1.03	9.6	1.9	5.24	114	3.09	0.00	0.84	1.81	1714
R+4	16.9	10.1	0.28	0.19	14.49	1.12	12.0	2.8	5.70	162	2.31	0.31	1.78	1.22	2370
R+4	16.4	10.5	0.28	0.19	14.11	1.10	12.0	2.9	5.60	157	2.31	0.35	1.72	1.20	2327
R+6	24.6	16.9	0.32	0.22	18.68	1.33	12.6	7.0	6.77	220	2.16	3.97	5.24	1.12	3192
R+6	23.5	25.8	0.32	0.22	17.81	1.29	12.6	10.1	6.56	210	2.16	6.74	7.50	1.09	3096
R+8	41.0	23.3	0.38	0.26	26.16	1.62	14.4	15.9	8.24	337	1.79	10.48	11.55	0.97	4617
R+8	39.4	22.4	0.38	0.26	25.15	1.57	14.4	14.7	7.99	322	1.79	9.57	10.61	0.94	4475
R+10	41.2	28.5	0.42	0.29	23.77	1.51	15.0	19.6	7.68	316	1.68	12.80	13.59	0.74	4757
R+10	39.9	25.8	0.42	0.29	23.04	1.48	15.0	17.1	7.53	307	1.68	11.02	11.81	0.73	4662
R+12	46.2	76.8	0.41	0.28	27.36	1.51	15.0	59.2	7.68	316	1.68	42.19	43.83	0.78	4643
R+12	46.6	49.8	0.41	0.28	27.56	1.48	15.0	38.6	7.53	307	1.68	26.94	27.55	0.76	4551
F+2	4.6	8.5	0.21	0.14	5.34	0.60	7.4	0.7	3.04	39	0.00	0.98	0.99	1.17	941
F+2	1.9	2.5	0.21	0.14	2.16	0.35	6.1	0.1	1.80	15	0.00	0.14	0.00	0.69	556
F+4	13.8	15.8	0.28	0.19	11.95	1.07	8.9	3.6	5.45	112	0.00	4.54	4.62	1.18	2250
F+4	13.8	16.3	0.28	0.19	11.92	1.07	8.9	3.7	5.44	112	0.00	4.67	4.75	1.18	2246
F+6	20.4	23.5	0.36	0.25	13.77	1.18	9.2	8.0	6.00	134	0.00	9.66	9.96	0.79	3184
F+6	20.8	21.6	0.36	0.25	14.04	1.19	9.3	7.5	6.08	138	0.00	8.98	9.24	0.80	3224
F+6	20.4	23.5	0.36	0.25	13.77	0.74	17.8	8.0	3.74	127	0.00	5.01	5.17	0.49	1985
F+6	20.8	21.6	0.36	0.25	14.04	0.75	17.8	7.5	3.81	131	0.00	4.68	4.81	0.50	2019
F+8	26.4	22.4	0.37	0.25	17.34	0.90	18.1	9.9	4.59	176	0.00	6.06	6.23	0.57	2501
F+8	29.6	21.8	0.37	0.25	19.39	0.99	18.2	10.7	5.05	205	0.00	6.54	6.72	0.63	2756
F+10	41.2	22.7	0.42	0.29	23.77	1.18	18.6	15.6	5.99	271	0.00	9.27	9.55	0.58	3710
F+10	40.5	26.9	0.42	0.29	23.37	1.16	18.6	18.1	5.91	265	0.00	10.82	11.21	0.57	3659
F+12	43.0	39.9	0.42	0.29	24.83	1.22	18.7	28.6	6.21	287	0.00	16.96	17.87	0.60	3845
F+12	43.2	51.8	0.42	0.29	24.98	1.23	18.8	37.3	6.24	290	0.00	22.13	23.69	0.60	3864

RILL DATA ANALYSIS SOIL: WILLIAMS DATE: AUGUST 3, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 6	slope = 5.30 %														
R+0	3.2	23.0	0.12	0.08	6.42	0.91	9.0	1.2	4.72	91	3.35	0.00	0.88	5.33	837
R+2	6.6	10.4	0.24	0.16	6.71	0.61	11.4	1.1	3.16	64	2.47	0.00	0.00	0.93	1098
R+2	9.7	10.0	0.24	0.16	9.76	0.82	11.4	1.6	4.25	99	2.47	0.00	0.82	1.26	1475
R+4	14.5	12.3	0.29	0.20	12.11	0.96	12.0	3.0	4.98	132	2.31	0.44	1.94	1.01	2088
R+4	15.2	18.1	0.29	0.20	12.69	0.99	12.0	4.6	5.13	138	2.31	1.94	3.10	1.04	2153
R+6	21.2	25.6	0.36	0.25	14.31	1.08	13.2	9.1	5.60	173	2.03	5.61	6.17	0.73	2916
R+6	20.8	36.4	0.36	0.25	14.04	1.06	13.2	12.6	5.50	168	2.03	8.61	8.59	0.72	2862
R+8	35.9	27.9	0.39	0.27	22.31	1.48	13.8	16.7	7.68	290	1.90	11.51	12.26	0.86	4329
R+8	35.3	30.3	0.39	0.27	21.94	1.46	13.8	17.8	7.57	285	1.90	12.42	13.08	0.85	4271
R+10	38.6	33.9	0.45	0.31	20.81	1.52	14.4	21.8	7.88	316	1.79	15.03	15.64	0.66	5130
R+10	38.8	25.4	0.45	0.31	20.90	1.51	14.4	16.4	7.83	312	1.79	10.85	11.65	0.66	5096
R+12	46.6	30.9	0.46	0.32	24.59	1.32	15.0	24.0	6.85	266	1.68	16.10	16.31	0.55	4554
R+12	46.1	40.4	0.46	0.32	24.33	1.32	15.0	31.0	6.85	266	1.68	21.30	21.34	0.55	4554
F+2	4.6	9.6	0.24	0.16	4.69	0.54	6.7	0.7	2.80	31	0.00	1.24	1.25	0.83	972
F+2	1.9	6.6	0.24	0.16	1.91	0.35	5.5	0.2	1.79	13	0.00	0.42	0.00	0.53	621
F+4	14.0	20.8	0.29	0.20	11.69	0.93	12.5	4.9	4.83	132	0.00	4.30	4.38	0.98	2027
F+4	13.0	14.6	0.29	0.20	10.86	0.88	12.3	3.1	4.57	119	0.00	2.84	2.88	0.92	1918
F+6	21.5	21.2	0.33	0.23	15.84	0.90	13.4	7.6	4.69	135	0.00	6.28	6.47	0.73	2236
F+6	21.2	17.4	0.33	0.23	15.58	0.89	13.4	6.1	4.62	132	0.00	5.08	5.20	0.72	2205
F+6	21.5	21.2	0.33	0.23	15.84	1.33	9.0	7.6	6.91	162	0.00	9.35	9.57	1.08	3296
F+6	21.2	17.4	0.33	0.23	15.58	1.32	9.0	6.1	6.83	159	0.00	7.58	7.73	1.07	3261
F+8	27.3	25.1	0.37	0.25	17.90	1.44	9.3	11.4	7.47	188	0.00	13.59	14.02	0.93	3995
F+8	25.2	19.2	0.37	0.25	16.52	1.37	9.1	8.0	7.10	171	0.00	9.79	10.03	0.88	3797
F+10	31.6	17.6	0.36	0.25	21.32	1.60	9.8	9.3	8.32	233	0.00	10.51	10.73	1.09	4332
F+10	30.1	17.3	0.36	0.25	20.29	1.56	9.6	8.7	8.07	219	0.00	9.98	10.18	1.06	4203
F+12	44.0	22.0	0.44	0.30	24.26	1.73	10.2	16.2	8.99	272	0.00	17.66	18.21	0.79	5722
F+12	44.4	31.6	0.44	0.30	24.49	1.74	10.2	23.4	9.04	275	0.00	25.46	26.61	0.79	5753

RILL DATA ANALYSIS SOIL: BARNES - ND DATE: AUGUST 4, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 99.28 Kinematic Viscosity = 0.952 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 42.46 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - - g/s/m^2 - - ->				
Rill 1	slope = 6.0 %														
R+0	3.3	36.1	0.21	0.14	3.79	0.50	7.5	2.0	2.94	37	3.63	0.00	0.00	1.15	753
R+2	10.7	30.7	0.35	0.24	7.41	0.77	9.4	5.5	4.52	90	2.76	3.73	3.59	0.63	1945
R+2	11.2	27.5	0.35	0.24	7.73	0.79	9.4	5.1	4.64	93	2.76	3.30	3.52	0.64	1995
R+4	17.0	31.3	0.38	0.26	10.85	0.92	11.3	8.9	5.40	140	2.19	6.57	6.62	0.64	2523
R+4	17.3	30.0	0.38	0.26	11.07	0.94	11.3	8.7	5.52	145	2.19	6.38	6.57	0.65	2578
R+6	21.8	30.9	0.41	0.28	12.91	1.06	11.9	11.2	6.22	183	2.03	8.48	8.77	0.63	3136
R+6	21.7	30.0	0.41	0.28	12.86	1.05	11.9	10.9	6.17	181	2.03	8.13	8.44	0.62	3107
R+8	29.6	27.8	0.43	0.30	16.72	1.24	12.5	13.7	7.28	244	1.90	10.29	10.83	0.67	3848
R+8	28.2	23.7	0.43	0.30	15.91	1.19	12.5	11.1	6.99	229	1.90	8.01	8.67	0.64	3693
R+10	34.5	26.8	0.45	0.31	18.62	1.28	13.8	15.4	7.52	281	1.66	10.79	11.32	0.63	4157
R+10	35.7	24.1	0.45	0.31	19.27	1.31	13.8	14.4	7.69	291	1.66	9.95	10.59	0.65	4254
R+12	46.5	22.6	0.48	0.33	23.51	1.52	8.1	17.5	8.93	213	3.33	20.85	21.08	0.66	5265
R+12	43.8	22.6	0.48	0.33	22.16	1.46	8.0	16.5	8.57	199	3.37	19.65	19.81	0.63	5057
F+2	4.3	0.1	0.22	0.15	4.76	0.70	5.9	0.0	4.10	49	0.00	0.01	0.00	1.44	1108
F+2	4.3	2.8	0.22	0.15	4.73	0.69	5.9	0.2	4.08	48	0.00	0.37	0.00	1.43	1103
F+4	13.4	13.0	0.34	0.23	9.57	1.09	7.1	2.9	6.39	113	0.00	4.56	4.62	0.94	2668
F+4	13.0	10.9	0.34	0.23	9.24	1.07	7.0	2.4	6.25	109	0.00	3.74	3.78	0.92	2613
F+6	18.9	14.3	0.35	0.24	13.12	1.33	7.5	4.5	7.79	161	0.00	6.72	6.82	1.08	3351
F+6	18.2	14.1	0.35	0.24	12.59	1.29	7.4	4.3	7.59	154	0.00	6.36	6.45	1.05	3263
F+6	18.9	14.3	0.35	0.24	13.12	1.19	8.0	4.5	6.96	146	0.00	6.27	6.36	0.97	2994
F+6	18.2	14.1	0.35	0.24	12.59	1.18	7.7	4.3	6.94	139	0.00	6.17	6.26	0.96	2984
F+8	25.5	15.8	0.40	0.27	15.48	1.25	9.0	6.7	7.34	179	0.00	8.26	8.41	0.78	3610
F+8	26.4	17.6	0.40	0.27	15.99	1.27	9.2	7.7	7.43	186	0.00	9.31	9.51	0.79	3655
F+10	33.6	22.0	0.42	0.29	19.41	1.45	9.4	12.3	8.50	232	0.00	14.51	14.91	0.82	4388
F+10	33.7	17.4	0.42	0.29	19.49	1.45	9.4	9.8	8.52	233	0.00	11.51	11.75	0.82	4399
F+12	40.9	23.1	0.44	0.30	22.53	1.60	9.6	15.7	9.39	274	0.00	18.22	18.77	0.82	5080
F+12	41.6	24.7	0.44	0.30	22.92	1.62	9.6	17.1	9.50	279	0.00	19.78	20.42	0.83	5137
Rill 2	slope = 5.9 %														
R+0	3.1	41.0	0.21	0.15	0.00	0.41	7.5	0.0	2.37	27	3.63	0.00	0.00	0.89	628
R+2	10.0	36.4	0.36	0.25	6.72	0.70	8.8	6.0	4.04	71	3.01	4.66	5.37	0.53	1819
R+2	10.1	52.7	0.36	0.25	6.79	0.71	8.8	8.8	4.10	72	3.01	8.22	8.02	0.54	1845
R+4	15.4	35.6	0.40	0.27	9.34	0.80	11.3	9.1	4.62	111	2.19	6.83	7.24	0.49	2309
R+4	16.4	55.7	0.40	0.27	9.95	0.84	11.3	15.2	4.85	119	2.19	12.86	12.50	0.52	2425

RILL DATA ANALYSIS SOIL: BARNES - ND DATE: AUGUST 4, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 5.9 %														
R+6	22.4	44.9	0.42	0.29	12.96	0.93	12.5	16.8	5.37	154	1.90	13.01	12.97	0.52	2819
R+6	21.8	32.1	0.42	0.29	12.60	0.91	12.5	11.7	5.25	149	1.90	8.48	8.86	0.51	2758
R+8	30.3	29.1	0.44	0.30	16.72	1.12	13.8	14.7	6.47	224	1.66	10.23	10.72	0.57	3556
R+8	29.1	29.1	0.44	0.30	16.06	1.09	13.8	14.1	6.29	216	1.66	9.77	10.26	0.55	3461
R+10	35.5	23.3	0.45	0.31	19.12	1.25	14.4	13.8	7.22	277	1.56	9.10	9.76	0.61	4059
R+10	35.8	26.9	0.45	0.31	19.31	1.26	14.4	16.1	7.28	280	1.56	10.86	11.42	0.61	4092
R+12	47.2	26.8	0.48	0.33	23.88	1.47	11.6	21.1	8.49	285	2.10	18.15	18.52	0.63	5092
R+12	44.1	23.0	0.48	0.33	22.30	1.40	11.5	16.9	8.08	262	2.12	14.24	14.77	0.60	4849
F+2	3.9	2.5	0.22	0.15	4.30	0.46	5.8	0.2	2.64	25	0.00	0.31	0.31	0.93	726
F+2	4.1	3.1	0.22	0.15	4.47	0.47	5.8	0.2	2.73	26	0.00	0.40	0.40	0.96	750
F+4	13.8	16.9	0.35	0.24	9.59	0.60	8.1	3.9	3.46	52	0.00	5.33	5.54	0.48	1514
F+4	13.9	19.1	0.35	0.24	9.65	0.60	8.1	4.4	3.48	52	0.00	6.06	6.33	0.48	1522
F+6	18.5	31.4	0.39	0.27	11.51	0.69	8.5	9.7	3.99	67	0.00	12.60	13.60	0.45	1943
F+6	17.8	28.8	0.39	0.27	11.09	0.67	8.4	8.6	3.88	64	0.00	11.30	12.13	0.43	1890
F+6	18.5	31.4	0.39	0.27	11.51	0.88	11.2	9.7	5.10	128	0.00	9.57	9.95	0.57	2484
F+6	17.8	28.8	0.39	0.27	11.09	0.86	11.2	8.6	4.95	122	0.00	8.53	8.84	0.55	2414
F+8	25.2	22.6	0.40	0.27	15.30	1.10	11.7	9.5	6.36	186	0.00	9.02	9.26	0.68	3180
F+8	25.4	21.8	0.40	0.27	15.42	1.11	11.7	9.2	6.40	188	0.00	8.77	8.99	0.68	3200
F+10	32.9	23.5	0.44	0.30	18.12	1.26	11.9	12.9	7.26	231	0.00	12.02	12.37	0.64	3995
F+10	31.8	24.2	0.44	0.30	17.52	1.23	11.8	12.8	7.08	221	0.00	12.01	12.37	0.62	3893
F+12	41.7	32.8	0.46	0.32	21.98	1.46	12.1	22.8	8.41	294	0.00	20.91	21.76	0.68	4837
F+12	40.9	33.7	0.46	0.32	21.58	1.44	12.1	23.0	8.30	287	0.00	21.11	22.00	0.67	4771
Rill 3	slope = 5.8 %														
R+0	3.1	42.0	0.20	0.14	3.71	0.45	6.9	2.2	2.55	28	4.02	0.00	0.25	1.06	658
R+2	9.9	37.3	0.36	0.25	6.68	0.67	8.8	6.2	3.80	64	3.01	4.82	4.68	0.50	1741
R+2	10.3	36.3	0.36	0.25	6.95	0.69	8.8	6.2	3.92	67	3.01	4.90	4.89	0.51	1793
R+4	15.6	43.9	0.39	0.27	9.71	0.83	10.0	11.4	4.71	102	2.55	10.14	9.70	0.53	2336
R+4	16.9	33.7	0.39	0.27	10.53	0.88	10.0	9.5	4.99	111	2.55	8.00	8.23	0.56	2477
R+6	20.6	30.9	0.40	0.27	12.48	1.01	11.3	10.6	5.73	153	2.19	8.29	8.87	0.61	2915
R+6	21.3	27.1	0.40	0.27	12.93	1.03	11.3	9.6	5.85	158	2.19	7.34	8.09	0.62	2973
R+8	28.9	38.1	0.42	0.29	16.68	1.31	11.9	18.3	7.44	239	2.03	15.11	15.68	0.72	3970
R+8	27.2	31.2	0.42	0.29	15.73	1.26	11.9	14.1	7.15	226	2.03	11.20	11.94	0.69	3819
R+10	37.1	31.0	0.45	0.31	19.98	1.42	12.5	19.2	8.06	284	1.90	15.15	15.85	0.68	4611
R+10	35.2	28.0	0.45	0.31	19.00	1.38	12.5	16.4	7.83	272	1.90	12.72	13.49	0.66	4481
R+12	44.0	33.2	0.50	0.34	21.33	1.49	10.6	24.3	8.46	258	2.38	23.20	23.68	0.57	5376
R+12	43.2	28.5	0.50	0.34	20.95	1.47	10.5	20.5	8.34	252	2.38	19.23	19.84	0.57	5304

RILL DATA ANALYSIS SOIL: BARNES - ND DATE: AUGUST 4, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 3	slope = 5.8 %														
F+2	3.6	2.1	0.17	0.12	5.10	0.71	6.0	0.1	4.04	48	0.00	0.23	0.23	2.38	873
F+2	3.9	2.6	0.17	0.12	5.52	0.75	6.0	0.2	4.28	53	0.00	0.31	0.31	2.52	925
F+4	13.8	11.5	0.38	0.26	8.82	1.00	6.9	2.7	5.69	93	0.00	4.25	4.31	0.67	2751
F+4	13.9	12.4	0.38	0.26	8.90	1.01	6.9	2.9	5.72	94	0.00	4.60	4.67	0.67	2764
F+6	17.3	14.2	0.35	0.24	12.00	1.20	7.6	4.1	6.82	135	0.00	5.97	6.07	0.95	3034
F+6	17.5	16.1	0.35	0.24	12.11	1.21	7.7	4.7	6.86	136	0.00	6.82	6.94	0.95	3050
F+6	17.3	14.2	0.35	0.24	12.00	0.69	14.3	4.1	3.92	110	0.00	3.18	3.24	0.54	1743
F+6	17.5	16.1	0.35	0.24	12.11	0.70	14.4	4.7	3.95	112	0.00	3.64	3.72	0.55	1757
F+8	24.3	19.1	0.39	0.27	15.09	0.85	14.5	7.7	4.80	151	0.00	5.94	6.09	0.54	2380
F+8	25.3	14.9	0.39	0.27	15.76	0.88	14.5	6.3	4.99	160	0.00	4.82	4.92	0.56	2473
F+10	30.1	22.9	0.43	0.30	17.01	0.94	14.5	11.5	5.33	178	0.00	8.80	9.10	0.49	2914
F+10	33.8	29.1	0.43	0.30	19.08	1.04	14.6	16.4	5.88	207	0.00	12.46	12.98	0.54	3216
F+12	38.4	30.9	0.45	0.31	20.71	1.11	14.7	19.8	6.31	231	0.00	14.97	15.65	0.53	3608
F+12	41.8	32.4	0.45	0.31	22.52	1.19	14.8	22.6	6.76	258	0.00	17.01	17.80	0.57	3870
Rill 4	slope = 5.4 %														
R+0	2.9	35.4	0.30	0.20	2.35	0.38	6.9	1.7	2.01	19	4.02	0.00	0.00	0.39	814
R+2	9.4	41.3	0.37	0.25	6.16	0.63	9.4	6.5	3.33	57	2.76	4.89	4.64	0.41	1682
R+2	9.4	37.3	0.37	0.25	6.16	0.63	9.4	5.8	3.33	57	2.76	4.16	4.18	0.41	1682
R+4	16.5	38.0	0.42	0.29	9.55	0.80	10.6	10.5	4.23	92	2.35	8.58	8.59	0.41	2425
R+4	16.5	29.4	0.42	0.29	9.53	0.80	10.6	8.1	4.23	92	2.35	6.09	6.57	0.41	2425
R+6	21.3	28.5	0.44	0.30	11.76	0.86	11.3	10.1	4.54	108	2.19	7.83	8.23	0.40	2731
R+6	21.5	26.6	0.44	0.30	11.88	0.86	11.3	9.6	4.54	108	2.19	7.25	7.73	0.40	2731
R+8	28.1	26.9	0.46	0.32	14.82	1.12	12.5	12.6	5.92	179	1.90	9.28	10.09	0.48	3718
R+8	25.9	30.3	0.46	0.32	13.65	1.06	12.5	13.1	5.60	165	1.90	9.72	10.40	0.45	3519
R+10	36.3	28.9	0.47	0.32	18.74	1.32	13.1	17.5	6.98	240	1.77	13.05	13.88	0.54	4477
R+10	34.1	34.7	0.47	0.32	17.58	1.26	13.1	19.7	6.66	224	1.77	14.92	15.64	0.51	4274
R+12	44.4	29.5	0.50	0.34	21.54	1.46	10.8	21.8	7.72	230	2.31	20.14	20.99	0.52	5268
R+12	42.9	33.7	0.50	0.34	20.80	1.42	10.7	24.1	7.50	219	2.32	22.60	23.35	0.51	5124
F+2	3.4	1.9	0.20	0.14	4.14	0.49	7.6	0.1	2.59	31	0.00	0.16	0.00	1.10	708
F+2	3.6	1.6	0.20	0.14	4.33	0.51	7.6	0.1	2.68	33	0.00	0.14	0.00	1.14	732
F+4	13.5	28.3	0.32	0.22	10.22	0.93	9.6	6.3	4.93	104	0.00	7.35	7.58	0.82	2153
F+4	13.5	16.5	0.32	0.22	10.20	0.93	9.6	3.7	4.92	104	0.00	4.28	4.36	0.82	2151
F+6	18.5	16.8	0.37	0.25	12.16	1.05	10.0	5.2	5.56	130	0.00	5.78	5.89	0.69	2810
F+6	18.2	27.1	0.37	0.25	11.96	1.04	10.0	8.3	5.50	127	0.00	9.21	9.52	0.68	2779
F+6	18.5	16.8	0.37	0.25	12.16	1.01	9.2	5.2	5.33	112	0.00	6.30	6.45	0.66	2695
F+6	18.2	27.1	0.37	0.25	11.96	1.00	9.1	8.3	5.27	110	0.00	10.04	10.44	0.65	2662

RILL DATA ANALYSIS SOIL: BARNES - ND DATE: AUGUST 4, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 5.4 %														
F+8	23.4	27.8	0.40	0.27	14.20	1.13	9.4	10.8	5.97	136	0.00	12.80	13.33	0.63	3260
F+8	25.5	26.3	0.40	0.27	15.50	1.20	9.6	11.2	6.35	152	0.00	12.98	13.48	0.67	3468
F+10	32.4	37.7	0.45	0.31	17.46	1.21	10.9	20.3	6.40	175	0.00	20.81	22.12	0.54	3935
F+10	32.3	39.0	0.45	0.31	17.42	1.21	10.9	21.0	6.39	174	0.00	21.52	22.93	0.54	3930
F+12	41.1	34.0	0.49	0.34	20.33	1.34	11.4	23.3	7.08	212	0.00	22.75	24.10	0.50	4737
F+12	41.5	39.7	0.49	0.34	20.55	1.35	11.4	27.4	7.13	215	0.00	26.75	28.62	0.50	4771
Rill 5	slope = 5.9 %														
R+0	3.2	38.9	0.21	0.15	3.66	0.47	8.1	2.1	2.71	36	3.30	0.00	0.00	1.02	722
R+2	9.4	39.2	0.33	0.23	6.89	0.70	9.4	6.1	4.04	76	2.76	4.50	4.02	0.63	1667
R+2	9.5	31.8	0.33	0.23	6.98	0.70	9.4	5.0	4.04	76	2.76	3.20	3.29	0.63	1667
R+4	15.3	32.8	0.37	0.25	10.03	0.83	11.3	8.4	4.79	117	2.19	6.08	6.14	0.59	2216
R+4	17.0	28.1	0.37	0.25	11.14	0.90	11.3	7.9	5.20	132	2.19	5.66	6.13	0.64	2403
R+6	21.4	32.9	0.39	0.27	13.29	1.03	11.9	11.7	5.95	171	2.03	8.91	9.27	0.66	2899
R+6	21.9	31.6	0.39	0.27	13.64	1.05	11.9	11.6	6.06	176	2.03	8.78	9.21	0.68	2955
R+8	27.4	30.0	0.41	0.28	16.24	1.21	12.5	13.7	6.99	229	1.90	10.28	10.90	0.71	3580
R+8	25.8	26.8	0.41	0.28	15.28	1.16	12.5	11.5	6.70	215	1.90	8.36	9.06	0.68	3432
R+10	34.1	28.5	0.44	0.30	18.78	1.17	13.1	16.2	6.76	229	1.77	11.93	12.34	0.59	3715
R+10	31.6	34.2	0.44	0.30	17.43	1.30	13.1	18.0	7.51	268	1.77	13.46	14.01	0.66	4128
R+12	44.2	34.9	0.50	0.34	21.46	1.42	14.1	25.7	8.20	330	1.59	18.61	19.15	0.56	5124
R+12	41.4	35.0	0.50	0.34	20.11	1.36	14.1	24.2	7.85	307	1.61	17.49	17.97	0.53	4907
F+2	3.9	2.7	0.15	0.10	6.29	0.71	7.6	0.2	4.09	63	0.00	0.26	0.00	3.09	766
F+2	2.5	3.1	0.15	0.10	4.05	0.51	7.0	0.1	2.92	35	0.00	0.21	0.00	2.21	548
F+4	12.2	8.9	0.30	0.21	9.88	0.97	8.5	1.8	5.63	113	0.00	2.38	2.40	1.06	2110
F+4	12.7	7.2	0.30	0.21	10.26	1.00	8.6	1.5	5.76	118	0.00	1.96	1.98	1.09	2161
F+6	17.6	10.3	0.46	0.32	9.29	0.94	8.3	3.0	5.41	104	0.00	4.04	4.10	0.43	3110
F+6	16.7	9.4	0.46	0.32	8.79	0.90	8.2	2.6	5.22	97	0.00	3.52	3.57	0.42	2998
F+6	17.6	10.3	0.46	0.32	9.29	0.97	7.7	3.0	5.58	101	0.00	4.34	4.41	0.45	3205
F+6	16.7	9.4	0.46	0.32	8.79	0.93	7.6	2.6	5.37	94	0.00	3.78	3.83	0.43	3085
F+8	21.3	15.2	0.38	0.26	13.60	1.24	8.5	5.4	7.16	163	0.00	7.01	7.12	0.84	3400
F+8	21.2	12.7	0.38	0.26	13.56	1.24	8.5	4.5	7.15	162	0.00	5.85	5.94	0.84	3394
F+10	28.8	16.7	0.41	0.28	17.02	1.30	9.0	8.0	7.51	184	0.00	9.86	10.08	0.76	3846
F+10	28.6	22.4	0.41	0.28	16.95	1.38	9.5	10.7	7.96	213	0.00	12.44	12.76	0.80	4077
F+12	36.1	28.5	0.46	0.32	19.06	1.46	10.1	17.2	8.41	246	0.00	18.82	19.51	0.68	4836
F+12	38.2	37.7	0.46	0.32	20.14	1.51	10.3	24.0	8.71	263	0.00	25.92	27.18	0.70	5010

RILL DATA ANALYSIS SOIL: BARNES - ND DATE: AUGUST 4, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 6	slope = 5.7 %														
R+0	2.8	37.2	0.18	0.12	3.74	0.46	7.5	1.7	2.57	31	3.63	0.00	0.00	1.32	604
R+2	9.7	32.2	0.32	0.22	7.34	0.80	8.8	5.2	4.46	82	3.01	3.58	4.84	0.74	1847
R+2	10.2	32.6	0.32	0.22	7.75	0.83	8.8	5.5	4.63	87	3.01	4.03	5.32	0.77	1917
R+4	16.4	35.6	0.40	0.27	9.94	0.89	10.0	9.7	4.96	110	2.55	8.26	8.92	0.53	2569
R+4	16.8	30.4	0.40	0.27	10.21	0.91	10.0	8.5	5.08	114	2.55	6.91	7.84	0.54	2627
R+6	20.7	44.3	0.38	0.26	13.23	1.10	10.6	15.3	6.14	160	2.35	13.64	14.44	0.72	3016
R+6	21.4	34.7	0.38	0.26	13.64	1.12	10.6	12.3	6.25	165	2.35	10.55	11.59	0.74	3071
R+8	29.5	34.4	0.42	0.29	17.04	1.00	11.3	16.9	5.58	147	2.19	14.49	14.97	0.54	3031
R+8	27.4	45.0	0.42	0.29	15.84	0.94	11.3	20.6	5.24	134	2.19	18.14	18.19	0.51	2849
R+10	35.7	33.3	0.46	0.32	18.85	1.07	12.5	19.8	5.97	181	1.90	15.72	16.37	0.48	3552
R+10	32.8	36.5	0.46	0.32	17.29	1.00	12.5	19.9	5.58	163	1.90	15.81	16.28	0.45	3320
R+12	41.6	33.7	0.48	0.33	21.04	1.16	14.7	23.4	6.47	240	1.51	16.18	16.99	0.48	4018
R+12	40.0	28.5	0.48	0.33	20.24	1.12	14.6	19.0	6.25	226	1.52	12.96	13.73	0.46	3880
F+2	4.4	4.2	0.20	0.14	5.29	0.65	5.6	0.3	3.65	39	0.00	0.61	0.61	1.55	944
F+2	4.3	3.0	0.20	0.14	5.20	0.65	5.5	0.2	3.62	38	0.00	0.43	0.43	1.54	936
F+4	13.5	13.0	0.29	0.20	11.30	0.85	9.5	2.9	4.76	98	0.00	3.43	3.48	0.96	1784
F+4	13.8	13.4	0.29	0.20	11.53	0.87	9.5	3.1	4.83	100	0.00	3.60	3.66	0.98	1812
F+6	19.0	21.7	0.33	0.23	13.97	0.83	12.6	6.9	4.63	124	0.00	6.09	6.27	0.72	1976
F+6	19.0	21.3	0.33	0.23	13.96	0.83	12.6	6.7	4.63	124	0.00	5.96	6.13	0.72	1975
F+6	19.0	21.7	0.33	0.23	13.97	1.36	6.7	6.9	7.59	140	0.00	11.36	11.65	1.18	3241
F+6	19.0	21.3	0.33	0.23	13.96	1.36	6.7	6.7	7.59	140	0.00	11.11	11.39	1.18	3240
F+8	24.4	24.3	0.38	0.26	15.56	1.44	7.0	9.9	8.02	158	0.00	15.64	16.15	0.94	3945
F+8	25.3	21.8	0.38	0.26	16.14	1.47	7.1	9.2	8.18	165	0.00	14.37	14.78	0.96	4019
F+10	32.3	24.0	0.40	0.27	19.58	1.62	7.6	12.9	9.01	205	0.00	18.79	19.41	0.96	4662
F+10	31.9	19.3	0.40	0.27	19.33	1.60	7.6	10.2	8.95	202	0.00	14.97	15.36	0.95	4632
F+12	38.4	29.2	0.42	0.29	22.18	1.72	8.0	18.7	9.58	236	0.00	25.88	26.96	0.92	5207
F+12	40.1	27.3	0.42	0.29	23.15	1.76	8.1	18.2	9.79	248	0.00	24.87	25.84	0.94	5319

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 102.82 Kinematic Viscosity = 0.930 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 38.41 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.26 %														
R+0	2.9	36.6	0.23	0.15	3.03	0.37	8.8	1.8	1.54	17	2.73	0.00	0.00	0.52	615
R+2	10.3	45.7	0.39	0.27	6.42	0.56	11.9	7.9	2.33	44	1.84	5.52	6.07	0.26	1613
R+2	10.5	40.8	0.39	0.27	6.54	0.57	11.9	7.1	2.38	45	1.84	4.84	5.54	0.27	1642
R+4	16.8	41.6	0.50	0.34	8.16	0.64	12.5	11.7	2.67	56	1.72	8.65	9.56	0.18	2364
R+4	16.9	36.2	0.50	0.34	8.19	0.64	12.5	10.2	2.67	56	1.72	7.32	8.22	0.18	2364
R+6	18.5	45.2	0.47	0.32	9.57	0.78	13.8	14.0	3.25	83	1.50	9.78	11.05	0.25	2708
R+6	23.1	48.3	0.47	0.32	11.92	0.92	13.8	18.6	3.84	106	1.50	13.51	15.18	0.30	3194
R+8	32.6	47.3	0.56	0.38	14.12	0.81	16.3	25.7	3.38	104	1.17	16.41	18.53	0.18	3351
R+8	31.1	32.7	0.56	0.38	13.49	0.77	16.3	17.0	3.21	96	1.17	10.43	11.66	0.17	3185
R+10	35.8	46.2	0.57	0.39	15.23	0.86	16.9	27.6	3.59	118	1.10	17.04	19.23	0.19	3621
R+10	37.4	47.8	0.57	0.39	15.91	0.89	16.9	29.8	3.71	124	1.10	18.52	20.96	0.19	3747
F+2	6.1	28.7	0.32	0.22	4.62	0.40	10.9	2.9	1.65	24	0.00	2.97	0.00	0.27	938
F+2	6.5	26.0	0.32	0.22	4.94	0.42	11.0	2.8	1.76	26	0.00	2.86	3.02	0.29	996
F+4	13.4	43.0	0.44	0.30	7.40	0.58	11.9	9.6	2.40	46	0.00	8.98	10.08	0.21	1873
F+4	13.5	50.4	0.44	0.30	7.44	0.58	11.9	11.3	2.41	46	0.00	10.56	12.12	0.21	1880
F+6	20.0	44.5	0.47	0.32	10.32	0.56	14.6	14.8	2.35	54	0.00	11.29	13.20	0.18	1953
F+6	20.4	43.4	0.47	0.32	10.52	0.57	14.6	14.7	2.39	55	0.00	11.20	13.02	0.18	1987
F+6	20.0	44.5	0.47	0.32	10.32	0.81	7.4	14.8	3.39	47	0.00	22.29	26.73	0.26	2823
F+6	20.4	43.4	0.47	0.32	10.52	0.83	7.4	14.7	3.44	49	0.00	22.08	26.30	0.26	2865
F+8	30.5	47.8	0.51	0.35	14.52	0.92	9.2	24.3	3.84	71	0.00	29.40	36.00	0.25	3466
F+8	28.2	49.8	0.51	0.35	13.40	0.86	9.1	23.4	3.60	64	0.00	28.60	35.61	0.24	3255
F+10	35.1	53.4	0.53	0.36	16.06	0.99	9.3	31.2	4.15	81	0.00	37.15	46.91	0.25	3895
F+10	35.4	55.0	0.53	0.36	16.18	1.00	9.3	32.4	4.17	82	0.00	38.56	49.10	0.25	3917
Rill 2	slope = 4.46 %														
R+0	1.9	35.4	0.22	0.15	2.14	0.27	8.1	1.1	1.18	11	2.98	0.00	0.00	0.42	436
R+2	8.9	39.5	0.42	0.29	5.17	0.48	11.3	5.9	2.10	35	1.98	3.83	4.16	0.20	1489
R+2	9.2	40.1	0.42	0.29	5.32	0.48	11.3	6.2	2.10	35	1.98	4.10	4.36	0.20	1489
R+4	16.1	38.7	0.45	0.31	8.69	0.68	12.5	10.4	2.97	66	1.72	7.52	9.09	0.25	2260
R+4	15.7	40.3	0.45	0.31	8.46	0.67	12.5	10.5	2.92	64	1.72	7.66	9.22	0.25	2227
R+6	19.9	83.0	0.49	0.34	9.86	0.68	13.8	27.5	2.97	72	1.50	20.74	25.25	0.21	2461
R+6	20.5	87.0	0.49	0.34	10.16	0.70	13.8	29.8	3.06	76	1.50	22.54	27.73	0.22	2534
R+8	27.9	65.3	0.55	0.38	12.29	0.77	14.4	30.3	3.36	91	1.41	22.02	26.55	0.19	3128
R+8	26.2	54.3	0.55	0.38	11.57	0.74	14.4	23.7	3.23	86	1.41	16.95	19.96	0.18	3007
R+10	34.2	70.3	0.56	0.38	14.81	0.90	15.6	40.0	3.93	125	1.24	27.22	32.78	0.21	3723
R+10	34.1	66.7	0.56	0.38	14.78	0.90	15.6	37.9	3.93	125	1.24	25.72	30.71	0.21	3723

RILL DATA ANALYSIS SOIL: SVERDRUP DATE: AUGUST 6, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 4.46 %														
F+2	5.6	20.5	0.29	0.20	4.65	0.64	4.9	1.9	2.80	23	0.00	4.34	4.53	0.57	1376
F+2	5.5	35.7	0.29	0.20	4.64	0.30	4.0	3.3	1.29	6	0.00	9.27	13.53	0.26	632
F+4	12.1	48.8	0.43	0.30	6.82	0.82	5.4	9.8	3.59	38	0.00	20.07	23.21	0.33	2616
F+4	11.1	47.1	0.43	0.30	6.27	0.78	5.3	8.7	3.41	34	0.00	18.27	21.08	0.31	2482
F+6	17.2	29.9	0.45	0.31	9.27	0.87	7.3	8.6	3.78	55	0.00	13.07	14.21	0.32	2881
F+6	18.2	30.5	0.45	0.31	9.79	0.90	7.4	9.2	3.93	59	0.00	13.93	15.14	0.33	2995
F+6	17.2	29.9	0.45	0.31	9.27	0.82	9.7	8.6	3.57	68	0.00	9.77	10.45	0.30	2719
F+6	18.2	30.5	0.45	0.31	9.79	0.86	9.8	9.2	3.73	73	0.00	10.49	11.22	0.31	2843
F+8	24.4	27.2	0.48	0.33	12.36	1.03	10.0	11.1	4.48	98	0.00	12.25	13.00	0.33	3639
F+8	23.1	30.5	0.48	0.33	11.65	0.98	10.0	11.7	4.28	91	0.00	13.07	13.99	0.32	3478
F+10	29.0	34.4	0.54	0.37	13.03	1.07	10.1	16.6	4.66	105	0.00	18.28	19.90	0.27	4263
F+10	29.6	39.3	0.54	0.37	13.28	1.08	10.1	19.4	4.73	107	0.00	21.23	23.41	0.28	4325
Rill 3	slope = 4.59 %														
R+0	2.7	39.3	0.23	0.16	2.86	0.32	8.8	1.7	1.44	16	2.73	0.00	0.00	0.48	534
R+2	9.9	29.9	0.41	0.28	5.84	0.51	11.9	4.9	2.29	42	1.84	2.76	2.99	0.23	1545
R+2	9.9	29.4	0.41	0.28	5.83	0.51	11.9	4.8	2.29	42	1.84	2.68	2.93	0.23	1545
R+4	17.9	29.8	0.48	0.33	9.04	0.65	12.5	8.9	2.92	64	1.72	6.18	6.72	0.22	2305
R+4	18.0	35.1	0.48	0.33	9.10	0.66	12.5	10.5	2.96	66	1.72	7.65	8.12	0.22	2340
R+6	22.2	33.7	0.53	0.36	10.18	0.72	13.1	12.5	3.23	79	1.60	8.98	9.64	0.20	2819
R+6	22.2	28.7	0.53	0.36	10.18	0.72	13.1	10.7	3.24	79	1.60	7.41	8.12	0.20	2826
R+8	29.6	34.4	0.56	0.38	12.84	0.80	15.0	17.0	3.59	105	1.32	11.28	12.17	0.19	3309
R+8	29.7	28.8	0.56	0.38	12.85	0.80	15.0	14.2	3.59	105	1.32	9.21	10.04	0.19	3309
R+10	34.0	37.4	0.53	0.36	15.58	0.95	16.3	21.2	4.27	147	1.17	13.35	14.49	0.26	3719
R+10	35.5	41.5	0.53	0.36	16.26	0.98	16.3	24.5	4.40	154	1.17	15.61	16.94	0.27	3837
F+2	6.1	17.9	0.36	0.25	4.12	0.41	9.2	1.8	1.86	24	0.00	2.20	2.29	0.24	1102
F+2	6.2	26.5	0.36	0.25	4.19	0.42	9.3	2.8	1.88	25	0.00	3.28	3.48	0.25	1112
F+4	13.1	31.0	0.47	0.32	6.78	0.50	11.8	6.8	2.27	41	0.00	6.40	6.99	0.17	1751
F+4	12.7	34.2	0.47	0.32	6.58	0.49	11.8	7.3	2.21	40	0.00	6.87	7.59	0.17	1704
F+6	18.5	27.8	0.51	0.35	8.81	0.59	12.1	8.6	2.65	54	0.00	7.89	8.59	0.17	2226
F+6	18.7	29.7	0.51	0.35	8.88	0.59	12.1	9.3	2.67	54	0.00	8.51	9.33	0.17	2240
F+6	18.5	27.8	0.51	0.35	8.81	0.78	9.7	8.6	3.49	65	0.00	9.82	10.54	0.23	2923
F+6	18.7	29.7	0.51	0.35	8.88	0.78	9.7	9.3	3.50	65	0.00	10.57	11.39	0.23	2935
F+8	26.3	27.3	0.52	0.36	12.27	0.96	10.9	12.0	4.31	101	0.00	12.16	12.94	0.27	3685
F+8	25.5	24.9	0.52	0.36	11.88	0.94	10.8	10.6	4.22	96	0.00	10.85	11.50	0.26	3606
F+10	29.0	36.7	0.53	0.36	13.26	1.01	11.2	17.7	4.54	112	0.00	17.56	19.13	0.27	3956
F+10	29.6	27.4	0.53	0.36	13.55	1.03	11.3	13.5	4.61	115	0.00	13.30	14.15	0.28	4014

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 4.11 %														
R+0	2.1	33.7	0.23	0.16	2.23	0.22	10.0	1.2	0.88	9	2.30	0.00	0.00	0.28	378
R+2	8.4	31.6	0.45	0.31	4.52	0.42	11.3	4.4	1.69	25	1.98	2.39	0.00	0.14	1396
R+2	9.0	37.3	0.45	0.31	4.83	0.45	11.3	5.6	1.81	28	1.98	3.53	2.79	0.15	1496
R+4	16.9	49.3	0.56	0.38	7.32	0.56	12.5	13.9	2.25	43	1.72	10.62	11.99	0.12	2317
R+4	16.3	34.2	0.56	0.38	7.05	0.54	12.5	9.3	2.17	41	1.72	6.53	7.41	0.12	2234
R+6	20.0	40.6	0.54	0.37	9.00	0.66	13.8	13.5	2.65	61	1.50	9.44	11.10	0.15	2633
R+6	19.0	37.9	0.54	0.37	8.55	0.64	13.8	12.0	2.57	58	1.50	8.22	9.70	0.15	2553
R+8	26.7	63.7	0.58	0.40	11.17	0.78	13.8	28.3	3.14	79	1.50	21.40	26.21	0.16	3342
F+2	5.5	31.9	0.33	0.23	4.02	0.49	7.7	2.9	1.97	22	0.00	4.20	4.51	0.31	1192
F+2	12.6	37.8	0.44	0.30	6.97	0.56	11.6	8.0	2.24	40	0.00	7.66	8.55	0.20	1806
F+4	17.6	35.5	0.49	0.34	8.70	0.67	11.7	10.4	2.71	54	0.00	9.84	10.93	0.19	2443
F+4	17.4	39.8	0.49	0.34	8.63	0.67	11.7	11.6	2.69	53	0.00	10.94	12.32	0.19	2425
F+6	17.6	35.5	0.49	0.34	8.70	0.61	12.5	10.4	2.46	50	0.00	9.23	10.35	0.17	2211
F+6	17.4	39.8	0.49	0.34	8.63	0.61	12.5	11.6	2.44	49	0.00	10.25	11.69	0.17	2195
F+6	26.9	40.6	0.53	0.36	12.30	0.83	12.8	18.2	3.32	80	0.00	15.75	17.87	0.20	3235
F+6	24.8	40.6	0.53	0.36	11.36	0.77	12.7	16.8	3.10	72	0.00	14.66	16.70	0.19	3022
F+8	29.8	34.7	0.56	0.38	12.91	0.89	12.9	17.2	3.58	90	0.00	14.82	16.46	0.19	3681
F+8	31.0	34.4	0.56	0.38	13.42	0.89	12.9	17.8	3.58	90	0.00	15.28	17.03	0.19	3681
Rill 5	slope = 4.21 %														
R+0	2.1	43.1	0.23	0.16	2.17	0.28	8.1	1.5	1.15	10	2.98	0.00	1.10	0.36	480
R+2	9.1	50.9	0.44	0.30	5.01	0.46	11.3	7.7	1.90	30	1.98	5.63	6.67	0.17	1495
R+2	9.0	60.2	0.44	0.30	4.98	0.46	11.3	9.1	1.90	30	1.98	6.98	8.03	0.17	1495
R+4	16.1	53.0	0.52	0.36	7.50	0.59	12.5	14.2	2.43	49	1.72	10.90	12.42	0.15	2266
R+4	16.0	47.2	0.52	0.36	7.48	0.59	12.5	12.6	2.43	49	1.72	9.49	10.83	0.15	2266
R+6	21.4	40.2	0.56	0.38	9.29	0.68	13.8	14.4	2.80	66	1.50	10.09	11.47	0.15	2813
R+6	20.5	26.1	0.56	0.38	8.90	0.65	13.8	8.9	2.68	62	1.50	5.73	6.84	0.15	2689
R+8	28.6	47.0	0.57	0.39	12.16	0.80	14.4	22.4	3.30	88	1.41	15.89	17.97	0.17	3369
R+8	25.9	42.2	0.57	0.39	11.01	0.74	14.4	18.2	3.05	79	1.41	12.67	14.31	0.16	3116
R+10	32.3	34.6	0.58	0.40	13.50	0.87	15.0	18.6	3.58	105	1.32	12.46	13.94	0.18	3728
R+10	34.8	41.6	0.58	0.40	14.54	0.92	15.0	24.1	3.79	114	1.32	16.52	18.48	0.19	3942

RILL DATA ANALYSIS SOIL: SVERDRUP DATE: AUGUST 6, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 5	slope = 4.21 %														
F+2	5.1	23.5	0.34	0.23	3.64	0.42	7.3	2.0	1.71	17	0.00	3.04	3.24	0.25	1042
F+2	5.3	46.3	0.34	0.23	3.82	0.43	7.4	4.1	1.78	18	0.00	6.23	7.07	0.26	1085
F+4	11.4	26.4	0.42	0.29	6.57	0.69	7.9	5.0	2.85	39	0.00	7.03	7.53	0.27	2144
F+4	11.9	27.9	0.42	0.29	6.88	0.56	10.3	5.5	2.31	37	0.00	5.97	6.46	0.22	1739
F+6	17.4	32.2	0.41	0.28	10.31	0.77	11.3	9.3	3.16	65	0.00	9.21	9.94	0.32	2325
F+6	17.7	28.7	0.41	0.28	10.46	0.78	11.3	8.4	3.20	67	0.00	8.29	8.86	0.32	2350
F+6	17.4	32.2	0.41	0.28	10.31	0.90	10.0	9.3	3.72	74	0.00	10.35	11.06	0.38	2738
F+6	17.7	28.7	0.41	0.28	10.46	0.91	10.1	8.4	3.77	76	0.00	9.32	9.89	0.38	2768
F+8	25.9	29.0	0.51	0.35	12.31	1.03	10.4	12.5	4.26	94	0.00	13.44	14.43	0.28	3896
F+8	23.4	28.9	0.51	0.35	11.12	0.96	10.2	11.2	3.95	82	0.00	12.29	13.22	0.26	3610
F+10	29.3	31.8	0.54	0.37	13.17	1.09	10.5	15.5	4.48	102	0.00	16.46	17.85	0.26	4335
F+10	30.0	25.5	0.54	0.37	13.48	1.11	10.5	12.8	4.56	105	0.00	13.47	14.36	0.27	4411
Rill 6	slope = 3.77 %														
R+0	1.8	43.8	0.25	0.17	1.75	0.25	8.1	1.3	0.92	7	2.98	0.00	0.70	0.25	459
R+2	9.3	56.4	0.48	0.33	4.71	0.49	10.0	8.7	1.81	25	2.30	7.42	9.19	0.13	1737
R+2	9.2	45.7	0.48	0.33	4.63	0.48	10.0	7.0	1.77	24	2.30	5.44	7.03	0.13	1702
R+4	14.9	67.0	0.58	0.40	6.22	0.53	11.9	16.6	1.96	33	1.84	13.72	17.31	0.10	2271
R+4	16.4	54.7	0.58	0.40	6.86	0.58	11.9	15.0	2.14	38	1.84	12.16	14.91	0.11	2485
R+6	19.5	36.3	0.59	0.41	8.01	0.59	12.5	11.8	2.18	41	1.72	8.77	10.65	0.11	2571
R+6	18.3	40.4	0.59	0.41	7.53	0.55	12.5	12.3	2.03	37	1.72	9.23	11.22	0.10	2397
R+8	26.9	39.1	0.65	0.45	10.05	0.72	13.8	17.6	2.66	61	1.50	12.69	15.13	0.11	3457
R+8	23.7	33.1	0.65	0.45	8.84	0.65	13.8	13.1	2.40	53	1.50	9.05	10.85	0.10	3121
R+10	28.9	41.7	0.59	0.41	11.88	0.82	14.4	20.1	3.03	78	1.41	14.11	16.59	0.15	3574
R+10	31.5	58.1	0.59	0.41	12.94	0.88	14.4	30.5	3.25	86	1.41	22.14	26.88	0.16	3835
F+2	4.3	16.6	0.26	0.18	4.02	0.51	7.5	1.2	1.88	20	0.00	1.75	0.00	0.47	978
F+2	4.6	14.9	0.26	0.18	4.30	0.52	7.6	1.1	1.91	21	0.00	1.68	0.00	0.48	995
F+4	11.4	27.7	0.39	0.27	7.12	0.75	8.4	5.3	2.76	40	0.00	6.95	7.46	0.31	2159
F+4	11.4	24.0	0.39	0.27	7.10	0.75	8.4	4.6	2.76	40	0.00	6.02	6.39	0.31	2154
F+6	15.3	30.7	0.44	0.30	8.46	0.85	8.7	7.9	3.14	50	0.00	10.02	10.90	0.28	2768
F+6	15.7	33.0	0.44	0.30	8.66	0.87	8.7	8.6	3.19	51	0.00	10.96	12.00	0.28	2814
F+6	15.3	30.7	0.44	0.30	8.46	0.84	8.5	7.9	3.08	47	0.00	10.30	11.26	0.27	2714
F+6	15.7	33.0	0.44	0.30	8.66	0.85	8.5	8.6	3.13	49	0.00	11.23	12.37	0.27	2756
F+8	25.4	37.2	0.52	0.36	11.85	0.99	10.1	15.7	3.64	72	0.00	17.25	19.45	0.23	3789
F+8	22.4	41.1	0.52	0.36	10.46	0.94	9.4	15.4	3.46	62	0.00	18.24	20.96	0.22	3604
F+10	26.7	37.5	0.52	0.36	12.45	1.02	10.3	16.7	3.75	77	0.00	17.96	20.23	0.24	3907
F+10	29.6	41.0	0.52	0.36	13.79	1.08	10.7	20.2	3.99	88	0.00	20.93	23.77	0.25	4159

RILL DATA ANALYSIS   SOIL: BARNES - MN   DATE: AUGUST 9, 1987

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 96.20   Kinematic Viscosity = 0.908 x 10^{-6} m^2/s

Velocity Factor = 0.687 D_i = 38.02 $g/mn/m^2$

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 1	slope = 8.3 %														
R+0	3.4	61.4	0.27	0.19	3.05	0.45	6.4	3.5	3.66	43	3.91	2.10	0.00	0.85	919
R+2	9.9	57.3	0.46	0.32	5.24	0.57	7.7	9.5	4.63	74	3.16	10.55	10.08	0.37	1984
R+2	9.6	60.5	0.46	0.32	5.07	0.56	7.7	9.7	4.55	72	3.16	10.86	10.01	0.37	1949
R+4	16.9	72.5	0.51	0.35	8.05	0.78	9.0	20.4	6.34	138	2.62	22.70	24.31	0.41	3010
R+4	17.7	65.3	0.51	0.35	8.41	0.80	9.0	19.2	6.50	143	2.62	21.20	22.86	0.42	3087
R+6	22.1	62.1	0.52	0.36	10.30	0.91	10.3	22.8	7.39	198	2.21	22.53	24.46	0.46	3580
R+6	22.9	52.6	0.52	0.36	10.70	0.94	10.3	20.1	7.64	208	2.21	19.56	21.41	0.48	3698
R+8	27.3	97.9	0.50	0.34	13.26	1.02	11.5	44.6	8.29	265	1.89	41.02	44.62	0.56	3859
R+8	29.1	77.5	0.50	0.34	14.12	1.07	11.5	37.6	8.69	284	1.89	34.31	37.07	0.59	4048
R+10	37.2	110.9	0.54	0.37	16.73	1.21	12.8	68.8	9.83	380	1.64	58.02	63.63	0.57	4944
R+10	37.2	94.1	0.54	0.37	16.69	1.21	12.8	58.2	9.83	380	1.64	48.84	53.00	0.57	4944
F+2	5.7	39.8	0.33	0.23	4.20	0.52	7.2	3.8	4.19	59	0.00	5.88	6.07	0.65	1287
F+2	5.7	54.2	0.33	0.23	4.18	0.51	7.2	5.1	4.17	59	0.00	7.98	8.35	0.65	1283
F+4	14.0	74.8	0.37	0.25	9.20	0.81	10.0	17.5	6.59	163	0.00	19.33	20.45	0.82	2270
F+4	13.5	105.2	0.37	0.25	8.84	0.80	9.7	23.6	6.54	156	0.00	27.08	29.37	0.81	2253
F+6	19.6	87.9	0.40	0.27	11.86	0.94	11.2	28.7	7.64	227	0.00	28.46	30.42	0.81	2845
F+6	20.6	85.0	0.40	0.27	12.49	0.97	11.4	29.2	7.89	243	0.00	28.41	30.26	0.84	2939
F+6	19.6	87.9	0.40	0.27	11.86	1.03	9.3	28.7	8.34	215	0.00	34.39	36.91	0.89	3109
F+6	20.6	85.0	0.40	0.27	12.49	1.07	9.3	29.2	8.68	229	0.00	34.85	37.28	0.92	3235
F+8	27.8	88.9	0.44	0.30	15.34	1.25	9.4	41.2	10.12	292	0.00	48.55	52.34	0.89	4148
F+8	29.9	86.0	0.44	0.30	16.48	1.31	9.5	42.9	10.66	318	0.00	50.17	53.90	0.94	4369
F+10	35.3	88.5	0.54	0.37	15.87	1.28	9.5	52.1	10.37	304	0.00	61.17	67.10	0.60	5218
F+10	36.6	101.9	0.54	0.37	16.44	1.31	9.5	62.2	10.64	317	0.00	72.77	81.00	0.62	5352
Rill 2	slope = 8.6 %														
R+2	8.4	68.9	0.43	0.30	4.73	0.61	6.4	9.6	5.13	72	3.91	12.76	9.24	0.47	1985
R+2	8.8	61.3	0.43	0.30	4.95	0.63	6.4	9.0	5.30	75	3.91	11.63	9.56	0.49	2050
R+4	15.2	62.5	0.46	0.32	8.03	0.91	7.7	15.9	7.66	157	3.16	19.75	21.07	0.61	3167
R+4	16.0	52.1	0.46	0.32	8.41	0.93	7.7	13.8	7.83	162	3.16	16.84	18.37	0.63	3237
R+6	20.8	52.7	0.51	0.35	9.90	0.93	9.6	18.3	7.83	203	2.40	18.74	20.05	0.51	3589
R+6	21.9	47.9	0.51	0.35	10.41	0.96	9.6	17.5	8.08	213	2.40	17.78	19.19	0.53	3704
R+8	27.7	65.6	0.49	0.34	13.70	1.11	10.9	30.3	9.34	299	2.04	28.80	30.62	0.66	4115
R+8	27.6	77.0	0.49	0.34	13.68	1.11	10.9	35.5	9.34	299	2.04	34.12	36.23	0.66	4115
R+10	33.6	100.5	0.51	0.35	15.99	1.21	12.2	56.3	10.18	381	1.76	49.59	53.09	0.67	4669
R+10	35.2	79.5	0.51	0.35	16.74	1.25	12.2	46.6	10.52	400	1.76	40.76	43.34	0.69	4823

RILL DATA ANALYSIS SOIL: BARNES - MN DATE: AUGUST 9, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 8.6 %														
F+2	4.8	15.5	0.29	0.20	3.98	0.65	4.4	1.2	5.45	54	0.00	3.08	3.11	1.10	1421
F+2	5.0	27.2	0.29	0.20	4.17	0.67	4.5	2.3	5.62	58	0.00	5.57	5.69	1.13	1464
F+4	12.6	66.2	0.39	0.27	7.82	0.97	5.5	13.9	8.16	124	0.00	27.86	29.55	0.91	2861
F+4	11.3	62.8	0.39	0.27	7.05	0.91	5.3	11.9	7.69	109	0.00	24.70	26.15	0.86	2697
F+6	18.4	77.1	0.43	0.30	10.38	0.91	8.4	23.7	7.69	172	0.00	31.41	33.80	0.71	2973
F+6	19.1	78.0	0.43	0.30	10.77	0.94	8.5	24.8	7.89	180	0.00	32.63	35.10	0.73	3051
F+6	18.4	77.1	0.43	0.30	10.38	0.99	8.5	23.7	8.32	197	0.00	30.83	32.85	0.76	3216
F+6	19.1	78.0	0.43	0.30	10.77	1.02	8.6	24.8	8.55	206	0.00	32.26	34.38	0.79	3306
F+8	27.3	90.0	0.47	0.32	14.08	1.24	8.8	40.9	10.40	283	0.00	51.84	55.99	0.80	4393
F+8	27.4	92.1	0.47	0.32	14.14	1.24	8.8	42.1	10.43	284	0.00	53.26	57.63	0.80	4406
F+10	32.2	77.6	0.53	0.36	14.74	1.28	8.8	41.6	10.74	298	0.00	52.50	56.55	0.65	5116
F+10	33.0	80.7	0.53	0.36	15.12	1.30	8.8	44.4	10.93	307	0.00	55.88	60.36	0.66	5207
Rill 3	slope = 8.9 %														
R+2	10.1	71.6	0.39	0.27	6.31	0.72	7.1	12.1	6.27	107	3.50	15.58	16.15	0.70	2125
R+2	10.2	65.0	0.39	0.27	6.37	0.73	7.1	11.1	6.36	109	3.50	13.97	14.79	0.71	2154
R+4	17.4	57.2	0.44	0.30	9.60	0.95	8.3	16.6	8.27	191	2.87	19.27	20.53	0.73	3163
R+4	17.1	40.0	0.44	0.30	9.46	0.94	8.3	11.4	8.19	188	2.87	12.39	13.95	0.72	3129
R+6	22.1	47.2	0.46	0.32	11.65	1.03	10.3	17.4	8.97	265	2.21	16.60	17.91	0.72	3585
R+6	21.4	62.3	0.46	0.32	11.26	1.01	10.3	22.2	8.80	258	2.21	21.79	23.02	0.71	3515
R+8	29.5	58.8	0.49	0.34	14.62	1.23	11.5	28.9	10.71	389	1.89	25.98	27.38	0.76	4560
R+8	29.7	52.7	0.49	0.34	14.72	1.23	11.5	26.1	10.71	389	1.89	23.26	24.62	0.76	4560
R+10	30.8	96.1	0.54	0.37	13.82	1.07	12.2	49.3	9.32	333	1.76	43.19	45.53	0.54	4372
R+10	32.8	98.9	0.54	0.37	14.72	1.12	12.2	54.0	9.75	357	1.76	47.48	50.17	0.57	4576
F+2	5.0	37.5	0.26	0.18	4.71	0.52	8.1	3.2	4.56	76	0.00	4.34	0.00	1.15	1031
F+2	5.1	42.3	0.26	0.18	4.75	0.53	8.1	3.6	4.59	77	0.00	4.93	0.00	1.15	1037
F+4	13.2	56.5	0.36	0.25	8.89	0.82	9.6	12.4	7.15	176	0.00	14.45	14.98	0.94	2237
F+4	18.8	62.7	0.36	0.25	12.70	1.07	10.3	19.7	9.28	280	0.00	21.23	22.01	1.22	2902
F+6	18.8	76.3	0.38	0.26	12.02	1.02	10.2	23.9	8.91	261	0.00	26.09	27.36	1.05	2942
F+6	19.3	83.2	0.38	0.26	12.29	1.04	10.2	26.7	9.06	268	0.00	29.00	30.55	1.07	2990
F+6	18.8	76.3	0.38	0.26	12.02	0.93	8.4	23.9	8.12	187	0.00	31.67	33.89	0.96	2682
F+6	19.3	83.2	0.38	0.26	12.29	0.95	8.4	26.7	8.27	192	0.00	35.32	38.04	0.97	2729
F+8	27.7	94.4	0.48	0.33	14.02	1.05	8.4	43.7	9.14	224	0.00	57.44	63.88	0.67	3810
F+8	27.1	95.2	0.48	0.33	13.71	1.03	8.4	43.0	8.99	219	0.00	56.65	63.08	0.66	3747
F+10	31.1	104.7	0.48	0.33	15.74	1.14	8.5	54.4	9.95	256	0.00	71.17	79.99	0.73	4151
F+10	33.7	109.9	0.48	0.33	17.01	1.21	8.5	61.7	10.53	280	0.00	80.44	90.86	0.78	4390

RILL DATA ANALYSIS SOIL: BARNES - MN DATE: AUGUST 9, 1987

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 8.5 %														
R+2	8.6	53.0	0.34	0.23	6.14	0.70	7.1	7.6	5.82	95	3.50	8.48	0.00	0.86	1801
R+2	8.7	46.0	0.34	0.23	6.20	0.71	7.1	6.7	5.91	97	3.50	7.00	0.00	0.87	1826
R+4	16.4	52.4	0.42	0.29	9.48	0.97	8.3	14.3	8.07	184	2.87	16.26	16.86	0.78	3082
R+4	16.2	49.1	0.42	0.29	9.33	0.96	8.3	13.2	7.99	181	2.87	14.78	15.41	0.77	3051
R+6	21.6	42.2	0.46	0.32	11.38	0.99	10.3	15.2	8.24	233	2.21	14.24	15.07	0.66	3446
R+6	21.9	46.1	0.46	0.32	11.53	1.00	10.3	16.8	8.32	237	2.21	15.97	16.78	0.67	3480
R+8	27.0	43.4	0.51	0.35	12.86	1.03	11.5	19.5	8.57	278	1.89	16.93	17.82	0.56	3974
R+8	27.0	51.5	0.51	0.35	12.83	1.03	11.5	23.1	8.57	278	1.89	20.39	21.23	0.56	3974
R+10	33.3	46.1	0.48	0.33	16.81	1.27	12.2	25.5	10.56	402	1.76	21.54	22.96	0.78	4612
R+10	34.4	104.8	0.48	0.33	17.38	1.30	12.2	60.0	10.81	417	1.76	53.01	56.42	0.80	4721
F+2	5.4	20.9	0.27	0.19	4.82	0.55	8.0	1.9	4.55	75	0.00	2.60	2.64	1.06	1118
F+2	5.5	25.7	0.27	0.19	4.91	0.56	8.0	2.3	4.62	76	0.00	3.25	3.30	1.08	1134
F+4	13.2	39.5	0.34	0.23	9.39	0.79	10.6	8.7	6.55	170	0.00	9.09	9.33	0.96	2024
F+4	13.3	45.9	0.34	0.23	9.48	0.79	10.6	10.1	6.59	173	0.00	10.63	10.96	0.97	2037
F+6	18.0	46.7	0.37	0.25	11.81	0.92	11.2	14.0	7.67	230	0.00	13.86	14.30	0.95	2581
F+6	18.4	45.0	0.37	0.25	12.08	0.94	11.3	13.8	7.81	237	0.00	13.63	14.04	0.97	2629
F+6	18.0	46.7	0.37	0.25	11.81	1.04	10.4	14.0	8.66	256	0.00	14.94	15.37	1.08	2915
F+6	18.4	45.0	0.37	0.25	12.08	1.06	10.5	13.8	8.81	263	0.00	14.67	15.07	1.09	2965
F+8	23.4	29.9	0.44	0.30	12.88	1.11	10.6	11.6	9.24	286	0.00	12.20	12.45	0.81	3696
F+8	24.1	26.3	0.44	0.30	13.28	1.14	10.6	10.6	9.44	297	0.00	11.04	11.24	0.83	3780
F+10	29.0	50.2	0.49	0.34	14.37	1.20	10.8	24.3	10.00	329	0.00	24.97	25.94	0.71	4456
F+10	29.1	50.0	0.49	0.34	14.43	1.21	10.8	24.3	10.03	330	0.00	24.95	25.91	0.71	4469
Rill 5	slope = 7.6 %														
R+2	9.3	53.6	0.39	0.27	5.81	0.63	8.3	8.3	4.69	81	2.87	8.26	7.45	0.52	1859
R+2	9.4	54.1	0.39	0.27	5.83	0.63	8.3	8.5	4.69	81	2.87	8.42	7.57	0.52	1859
R+4	17.7	32.3	0.45	0.31	9.57	0.84	9.6	9.5	6.25	145	2.40	8.62	9.31	0.52	2860
R+4	17.0	45.3	0.45	0.31	9.18	0.82	9.6	12.9	6.10	139	2.40	12.45	12.57	0.51	2792
R+6	22.3	24.0	0.45	0.31	12.01	0.91	11.5	8.9	6.77	195	1.89	6.69	7.64	0.57	3098
R+6	20.9	26.5	0.45	0.31	11.29	0.87	11.5	9.2	6.47	183	1.89	7.00	7.84	0.54	2962
R+8	26.6	49.3	0.46	0.32	14.05	1.07	12.8	21.9	7.96	277	1.64	17.35	18.01	0.64	3724
R+8	29.2	41.4	0.46	0.32	15.42	1.14	12.8	20.2	8.48	304	1.64	15.85	16.64	0.68	3968
R+10	33.0	49.5	0.51	0.35	15.70	1.16	13.5	27.2	8.63	328	1.53	20.96	21.73	0.56	4476
R+10	33.2	55.7	0.51	0.35	15.82	1.16	13.5	30.9	8.63	328	1.53	23.95	24.76	0.56	4476

RILL DATA ANALYSIS SOIL: BARNES - MN DATE: AUGUST 9, 1987

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 5	slope = 7.6 %														
F+2	5.8	37.4	0.27	0.19	5.24	0.62	7.4	3.6	4.62	71	0.00	5.44	5.59	1.08	1269
F+2	5.8	52.5	0.27	0.19	5.20	0.62	7.4	5.1	4.59	70	0.00	7.61	7.89	1.07	1262
F+4	13.9	41.0	0.37	0.25	9.12	0.75	10.9	9.5	5.56	137	0.00	9.70	10.05	0.69	2093
F+4	13.4	53.8	0.37	0.25	8.75	0.73	10.7	12.0	5.43	130	0.00	12.46	13.07	0.67	2045
F+6	19.5	48.0	0.39	0.27	12.14	0.94	11.4	15.6	6.96	201	0.00	15.28	15.90	0.78	2761
F+6	19.6	30.3	0.39	0.27	12.21	0.94	11.4	9.9	6.99	202	0.00	9.69	9.94	0.78	2773
F+6	19.5	48.0	0.39	0.27	12.14	1.16	9.0	15.6	8.60	219	0.00	19.25	19.97	0.96	3411
F+6	19.6	30.3	0.39	0.27	12.21	1.16	9.1	9.9	8.62	220	0.00	12.18	12.47	0.96	3419
F+8	24.7	62.4	0.40	0.27	14.95	1.26	10.2	25.7	9.36	281	0.00	27.88	29.24	0.99	3807
F+8	25.7	46.0	0.40	0.27	15.59	1.29	10.3	19.7	9.62	297	0.00	21.18	21.92	1.02	3915
F+10	32.0	57.1	0.46	0.32	16.88	1.36	10.6	30.5	10.14	328	0.00	32.10	33.69	0.81	4745
F+10	30.5	73.4	0.46	0.32	16.07	1.32	10.4	37.2	9.82	308	0.00	39.74	42.35	0.79	4594
Rill 6	slope = 7.7 %														
R+2	9.5	43.0	0.42	0.29	5.47	0.66	7.7	6.8	4.97	82	3.16	6.66	7.70	0.48	2097
R+2	9.6	48.8	0.42	0.29	5.57	0.67	7.7	7.8	5.05	84	3.16	8.17	9.00	0.49	2129
R+4	17.0	43.7	0.50	0.34	8.24	0.78	9.0	12.4	5.88	123	2.62	12.71	13.63	0.40	2951
R+4	16.4	60.9	0.50	0.34	7.95	0.76	9.0	16.6	5.73	118	2.62	17.97	18.48	0.39	2875
R+6	22.9	63.9	0.47	0.32	11.82	0.96	10.3	24.4	7.23	192	2.21	24.21	25.55	0.56	3414
R+6	21.5	48.9	0.47	0.32	11.12	0.96	10.3	17.5	7.23	192	2.21	16.80	18.06	0.56	3414
R+8	29.6	54.9	0.46	0.32	15.61	1.26	11.5	27.1	9.49	325	1.89	24.20	25.78	0.76	4385
R+8	30.5	59.7	0.46	0.32	16.11	1.27	11.5	30.4	9.57	329	1.89	27.39	29.09	0.77	4420
R+10	36.9	69.3	0.52	0.36	17.20	1.20	12.2	42.6	9.04	319	1.76	37.08	39.38	0.57	4721
R+10	37.6	73.5	0.52	0.36	17.54	1.22	12.2	46.0	9.19	327	1.76	40.22	42.80	0.58	4800
F+2	5.3	10.7	0.26	0.18	4.90	0.66	5.3	0.9	4.99	57	0.00	1.96	0.00	1.25	1302
F+2	5.5	7.9	0.26	0.18	5.14	0.68	5.4	0.7	5.12	60	0.00	1.49	1.50	1.29	1336
F+4	13.8	41.6	0.38	0.26	8.82	0.93	6.6	9.6	6.97	117	0.00	16.08	16.77	0.82	2661
F+4	13.4	58.9	0.38	0.26	8.56	0.91	6.6	13.2	6.84	113	0.00	22.34	23.75	0.81	2611
F+6	21.1	62.8	0.42	0.29	12.17	0.97	9.1	22.1	7.29	172	0.00	26.92	28.81	0.70	3075
F+6	20.4	55.4	0.42	0.29	11.76	0.94	9.1	18.8	7.10	165	0.00	23.03	24.45	0.68	2996
F+6	21.1	62.8	0.42	0.29	12.17	0.93	9.5	22.1	7.04	171	0.00	25.70	27.52	0.68	2969
F+6	20.4	55.4	0.42	0.29	11.76	0.91	9.5	18.8	6.86	164	0.00	22.03	23.40	0.66	2891
F+8	27.3	67.0	0.50	0.34	13.23	1.00	9.7	30.5	7.50	191	0.00	34.96	38.08	0.51	3766
F+8	29.8	66.7	0.50	0.34	14.45	1.06	10.0	33.1	7.95	215	0.00	36.90	40.07	0.54	3992
F+10	36.7	74.4	0.52	0.36	17.14	1.17	10.8	45.6	8.79	270	0.00	46.96	51.43	0.55	4589
F+10	36.8	62.0	0.52	0.36	17.19	1.17	10.8	38.1	8.80	271	0.00	39.19	42.22	0.55	4596

RILL DATA ANALYSIS SOIL: MEXICO DATE: JUNE 1, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 95.63 Kinematic Viscosity = 1.08 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 50.68 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 3.94 %														
R+0	3.6	67.2	0.21	0.14	4.25	0.52	7.5	4.0	2.00	20	4.34	1.65	3.07	0.80	992
R+0	3.7	66.3	0.21	0.14	4.31	0.52	7.5	4.0	1.98	20	4.34	1.65	3.06	0.79	982
R+2	10.9	49.5	0.32	0.22	8.29	0.63	12.5	9.0	2.43	45	2.26	5.77	5.91	0.40	1870
R+2	11.4	45.6	0.32	0.22	8.67	0.66	12.5	8.7	2.52	48	2.26	5.47	5.72	0.42	1944
R+4	19.2	34.3	0.39	0.27	11.96	0.86	13.1	11.0	3.29	75	2.12	7.19	7.45	0.37	3084
R+4	19.0	32.1	0.39	0.27	11.80	0.85	13.1	10.1	3.26	74	2.12	6.48	6.83	0.36	3048
R+6	26.2	25.2	0.42	0.29	15.06	0.93	15.0	11.0	3.56	97	1.75	6.41	6.85	0.34	3611
R+6	26.7	28.4	0.42	0.29	15.37	0.94	15.0	12.6	3.62	99	1.75	7.62	7.94	0.35	3670
R+8	34.1	24.6	0.45	0.31	18.24	1.06	16.3	14.0	4.08	128	1.55	8.02	8.41	0.34	4448
R+8	34.1	21.1	0.45	0.31	18.24	1.06	16.3	12.0	4.08	128	1.55	6.65	7.15	0.34	4448
R+10	41.3	20.5	0.46	0.31	21.91	1.17	17.5	14.1	4.51	160	1.38	7.60	8.07	0.37	4954
R+10	42.3	21.5	0.46	0.31	22.45	1.19	17.5	15.2	4.58	164	1.38	8.26	8.70	0.37	5039
F+2	5.6	4.2	0.25	0.17	5.49	0.41	12.5	0.4	1.59	24	0.00	0.35	0.35	0.44	947
F+2	6.3	15.7	0.25	0.17	6.15	0.46	12.5	1.7	1.77	28	0.00	1.47	1.51	0.49	1053
F+4	13.2	11.3	0.33	0.23	9.60	0.57	15.6	2.5	2.21	49	0.00	1.78	1.82	0.34	1772
F+4	13.5	9.4	0.33	0.23	9.77	0.58	15.6	2.1	2.24	50	0.00	1.50	1.53	0.34	1801
F+6	21.3	13.3	0.38	0.26	13.75	0.77	16.3	4.7	2.97	80	0.00	3.22	3.32	0.36	2680
F+6	21.1	14.4	0.38	0.26	13.62	0.76	16.3	5.1	2.94	79	0.00	3.46	3.57	0.35	2657
F+8	29.8	14.7	0.41	0.28	17.43	0.90	17.5	7.3	3.47	108	0.00	4.62	4.78	0.34	3454
F+8	29.4	15.0	0.41	0.28	17.24	0.89	17.5	7.4	3.43	106	0.00	4.67	4.84	0.34	3419
F+10	35.8	14.9	0.44	0.30	19.98	0.99	18.1	8.9	3.81	129	0.00	5.46	5.65	0.34	3986
F+10	36.4	20.9	0.44	0.30	20.27	1.00	18.1	12.6	3.86	132	0.00	7.75	8.15	0.35	4039
Rill 2	slope = 3.96 %														
R+0	3.5	68.1	0.20	0.14	4.18	0.34	11.9	4.0	1.32	17	2.43	1.30	0.69	0.54	641
R+0	3.5	66.5	0.20	0.14	4.18	0.34	11.9	3.9	1.30	17	2.43	1.21	0.57	0.53	632
R+2	10.8	51.2	0.38	0.26	6.90	0.55	12.5	9.3	2.11	37	2.26	5.96	6.05	0.25	1924
R+2	11.6	49.5	0.38	0.26	7.36	0.58	12.5	9.5	2.23	40	2.26	6.22	6.48	0.26	2030
R+4	21.0	38.3	0.43	0.30	11.76	0.78	14.4	13.4	3.02	72	1.86	8.47	9.35	0.27	3122
R+4	19.7	37.5	0.43	0.30	11.04	0.75	14.4	12.3	2.88	67	1.86	7.64	8.46	0.26	2982
R+6	26.3	33.9	0.46	0.31	13.97	0.91	15.6	14.9	3.50	98	1.64	8.94	9.96	0.28	3835
R+6	27.0	33.7	0.46	0.31	14.30	0.92	15.6	15.2	3.56	100	1.64	9.13	10.18	0.29	3899
R+8	34.7	36.3	0.45	0.31	18.58	1.04	16.9	21.0	4.01	129	1.46	12.36	13.57	0.33	4340
R+8	35.2	35.0	0.45	0.31	18.85	1.04	16.9	20.5	4.03	130	1.46	12.06	13.26	0.33	4361
R+10	42.4	39.1	0.48	0.33	21.31	1.16	17.5	27.7	4.49	159	1.38	16.19	17.71	0.33	5189
R+10	45.4	42.2	0.48	0.33	22.80	1.22	17.5	31.9	4.70	171	1.38	18.89	20.68	0.34	5435

RILL DATA ANALYSIS SOIL: MEXICO DATE: JUNE 1, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 3.96 %														
F+2	7.3	9.1	0.27	0.19	6.44	0.48	12.5	1.1	1.85	30	0.00	0.97	0.99	0.42	1212
F+2	7.2	9.4	0.27	0.19	6.36	0.47	12.5	1.1	1.83	30	0.00	1.00	1.01	0.41	1200
F+4	15.3	18.5	0.34	0.23	10.91	0.67	15.0	4.7	2.58	59	0.00	3.49	3.64	0.38	2101
F+4	14.6	21.9	0.34	0.23	10.43	0.64	15.0	5.4	2.48	56	0.00	3.96	4.17	0.36	2017
F+6	21.9	34.9	0.37	0.26	14.27	0.80	16.3	12.8	3.09	84	0.00	8.73	9.47	0.38	2754
F+6	21.6	39.4	0.37	0.26	14.07	0.79	16.3	14.2	3.05	83	0.00	9.70	10.64	0.37	2719
F+8	31.1	47.6	0.40	0.27	18.85	0.97	17.5	24.6	3.74	121	0.00	15.65	17.50	0.40	3580
F+8	32.4	33.2	0.40	0.27	19.64	1.00	17.5	17.9	3.88	128	0.00	11.40	12.28	0.41	3714
F+10	38.2	26.0	0.42	0.29	22.11	1.08	18.1	16.5	4.19	149	0.00	10.15	10.76	0.40	4210
F+10	38.6	23.8	0.42	0.29	22.33	1.09	18.1	15.3	4.23	151	0.00	9.38	9.89	0.41	4246
Rill 3	slope = 3.88 %														
R+0	4.1	50.8	0.22	0.15	4.48	0.35	12.5	3.5	1.31	18	2.26	0.86	1.53	0.44	718
R+2	11.2	41.1	0.37	0.25	7.39	0.59	12.5	7.7	2.22	40	2.26	4.56	4.93	0.28	1993
R+2	11.1	41.5	0.37	0.25	7.35	0.58	12.5	7.7	2.20	39	2.26	4.60	4.94	0.28	1976
R+4	20.7	38.8	0.44	0.30	11.44	0.88	12.5	13.4	3.32	72	2.26	9.64	10.00	0.29	3559
R+4	18.7	32.0	0.44	0.30	10.32	0.82	12.5	10.0	3.10	65	2.26	6.61	7.19	0.27	3315
R+6	25.7	23.0	0.48	0.33	13.15	0.96	13.1	9.9	3.63	87	2.12	6.25	7.09	0.27	4201
R+6	26.4	23.5	0.48	0.33	13.50	0.97	13.1	10.4	3.69	89	2.12	6.65	7.46	0.28	4267
R+8	35.2	23.9	0.51	0.35	16.72	1.02	15.6	14.0	3.88	114	1.64	8.34	9.01	0.25	4827
R+8	35.1	27.9	0.51	0.35	16.68	1.02	15.6	16.3	3.88	114	1.64	9.96	10.56	0.25	4827
R+10	41.9	24.4	0.54	0.37	18.80	1.04	17.5	17.0	3.93	130	1.38	9.42	10.05	0.23	5180
R+10	43.4	24.8	0.54	0.37	19.48	1.07	17.5	17.9	4.05	136	1.38	10.00	10.64	0.24	5330
F+2	7.3	8.3	0.29	0.20	6.19	0.46	12.5	1.0	1.75	28	0.00	0.90	0.92	0.36	1225
F+2	7.5	6.9	0.29	0.20	6.31	0.47	12.5	0.9	1.78	28	0.00	0.76	0.77	0.37	1246
F+4	15.0	12.9	0.38	0.26	9.68	0.60	15.0	3.2	2.27	49	0.00	2.39	2.48	0.27	2075
F+4	12.4	13.9	0.38	0.26	8.02	0.50	15.0	2.9	1.90	38	0.00	2.12	2.21	0.23	1741
F+6	22.0	13.3	0.43	0.30	12.43	0.73	15.6	4.9	2.76	68	0.00	3.49	3.62	0.25	2894
F+6	21.7	14.2	0.43	0.30	12.20	0.71	15.6	5.1	2.71	67	0.00	3.64	3.79	0.25	2847
F+8	31.6	15.4	0.45	0.31	17.07	0.94	16.3	8.1	3.56	104	0.00	5.53	5.76	0.30	3891
F+8	29.9	15.9	0.45	0.31	16.20	0.89	16.3	7.9	3.40	97	0.00	5.43	5.66	0.29	3713
F+10	36.4	20.8	0.43	0.30	20.52	1.04	17.5	12.6	3.96	132	0.00	8.01	8.42	0.36	4150
F+10	35.9	15.5	0.43	0.30	20.23	1.03	17.5	9.3	3.91	129	0.00	5.88	6.10	0.36	4097

RILL DATA ANALYSIS SOIL: MEXICO DATE: JUNE 1, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 3.94 %														
R+0	3.8	65.1	0.19	0.13	4.89	0.37	12.5	4.1	1.43	20	2.26	1.39	1.82	0.69	644
R+0	3.4	70.8	0.19	0.13	4.41	0.37	12.5	4.0	1.41	20	2.26	1.32	1.73	0.68	635
R+2	10.5	71.1	0.35	0.24	7.39	0.56	12.5	12.5	2.14	37	2.26	8.83	9.35	0.30	1777
R+2	9.9	53.4	0.35	0.24	6.97	0.53	12.5	8.9	2.04	35	2.26	5.60	6.21	0.29	1697
R+4	19.2	41.8	0.40	0.27	11.68	0.72	15.6	13.4	2.77	69	1.64	7.89	8.96	0.30	2663
R+4	18.8	43.2	0.40	0.27	11.44	0.71	15.6	13.6	2.74	68	1.64	8.02	9.08	0.29	2626
R+6	25.6	28.9	0.44	0.30	14.12	0.82	16.9	12.3	3.16	91	1.46	6.66	7.74	0.28	3335
R+6	26.8	37.2	0.44	0.30	14.80	0.86	16.9	16.6	3.29	96	1.46	9.48	10.70	0.29	3477
R+8	34.0	43.6	0.49	0.34	16.69	0.92	17.5	24.7	3.53	111	1.38	14.34	16.05	0.24	4191
R+8	34.4	40.1	0.49	0.34	16.88	0.93	17.5	23.0	3.56	113	1.38	13.23	14.79	0.25	4237
R+10	40.5	45.4	0.55	0.38	17.85	0.95	18.1	30.6	3.64	120	1.30	17.46	19.69	0.20	4812
R+10	38.3	35.0	0.55	0.38	16.89	0.91	18.1	22.4	3.49	113	1.30	12.41	13.87	0.20	4608
F+2	6.6	9.6	0.31	0.21	5.21	0.39	12.5	1.1	1.51	22	0.00	0.95	0.97	0.27	1124
F+2	6.8	9.3	0.31	0.21	5.32	0.40	12.5	1.1	1.54	23	0.00	0.94	0.96	0.27	1148
F+4	14.5	20.5	0.37	0.26	9.38	0.56	15.6	5.0	2.16	47	0.00	3.52	3.72	0.26	1942
F+4	14.0	22.4	0.37	0.26	9.04	0.54	15.6	5.2	2.08	45	0.00	3.70	3.93	0.25	1876
F+6	22.2	20.3	0.40	0.27	13.56	0.76	16.3	7.5	2.93	78	0.00	5.12	5.38	0.32	2796
F+6	21.7	17.2	0.40	0.27	13.26	0.75	16.3	6.2	2.87	76	0.00	4.24	4.42	0.31	2738
F+8	30.0	19.0	0.42	0.29	17.22	0.94	16.3	9.5	3.64	108	0.00	6.51	6.81	0.35	3700
F+8	28.2	14.2	0.42	0.29	16.18	0.89	16.3	6.7	3.44	99	0.00	4.55	4.71	0.33	3500
F+10	36.7	16.6	0.44	0.30	20.42	1.04	17.5	10.2	4.00	134	0.00	6.45	6.70	0.36	4186
F+10	33.8	17.4	0.44	0.30	18.83	0.96	17.5	9.8	3.72	120	0.00	6.24	6.51	0.33	3893
Rill 5	slope = 3.57 %														
R+2	11.1	29.2	0.27	0.18	10.13	0.86	11.3	5.4	2.99	56	2.61	2.75	3.72	0.71	2111
R+2	11.0	27.1	0.27	0.18	10.04	0.86	11.3	5.0	2.99	56	2.61	2.32	3.42	0.71	2111
R+4	19.2	28.7	0.37	0.25	12.61	0.78	15.6	9.2	2.71	67	1.64	4.90	4.97	0.34	2651
R+4	18.1	30.6	0.37	0.25	11.86	0.74	15.6	9.2	2.57	62	1.64	4.91	4.79	0.32	2514
R+6	27.2	24.0	0.43	0.29	15.45	0.93	16.3	10.9	3.23	90	1.55	5.88	6.27	0.30	3658
R+6	27.7	23.5	0.43	0.29	15.75	0.94	16.3	10.9	3.29	93	1.55	5.88	6.31	0.31	3717
R+8	34.5	26.0	0.47	0.32	17.98	1.01	16.9	15.0	3.51	106	1.46	8.41	8.77	0.28	4335
R+8	34.1	26.9	0.47	0.32	17.77	1.00	16.9	15.3	3.48	105	1.46	8.61	8.93	0.27	4292
R+10	41.9	19.4	0.49	0.34	20.82	1.07	18.1	13.5	3.72	125	1.30	7.01	7.53	0.27	4810
R+10	42.8	20.1	0.49	0.34	21.26	1.08	18.1	14.4	3.78	127	1.30	7.50	8.02	0.27	4878

RILL DATA ANALYSIS SOIL: MEXICO DATE: JUNE 1, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 3.57 %														
F+2	6.6	5.3	0.25	0.17	6.34	0.47	12.5	0.6	1.65	25	0.00	0.51	0.52	0.44	1103
F+2	6.7	4.3	0.25	0.17	6.45	0.48	12.5	0.5	1.68	26	0.00	0.42	0.43	0.45	1121
F+4	13.7	14.4	0.33	0.23	10.02	0.60	15.6	3.3	2.08	45	0.00	2.33	2.42	0.32	1824
F+4	13.3	11.5	0.33	0.23	9.77	0.58	15.6	2.6	2.03	43	0.00	1.82	1.87	0.32	1783
F+6	23.1	15.4	0.40	0.28	13.91	0.76	16.9	5.9	2.64	69	0.00	3.91	4.09	0.28	2820
F+6	23.2	11.6	0.40	0.28	13.94	0.76	16.9	4.5	2.65	69	0.00	2.96	3.06	0.28	2826
F+8	30.4	15.5	0.41	0.28	18.11	0.93	17.5	7.8	3.26	98	0.00	4.98	5.19	0.33	3510
F+8	30.1	12.2	0.41	0.28	17.92	0.92	17.5	6.1	3.23	97	0.00	3.88	4.01	0.33	3477
F+10	36.3	16.4	0.43	0.30	20.37	1.01	18.1	9.9	3.52	115	0.00	6.09	6.37	0.32	4031
F+10	36.6	13.5	0.43	0.30	20.55	1.01	18.1	8.2	3.55	116	0.00	5.05	5.24	0.32	4062
Rill 6	slope = 3.90 %														
R+2	10.0	39.8	0.35	0.24	6.89	0.57	11.9	6.6	2.16	36	2.43	3.79	4.40	0.29	1844
R+2	10.9	36.2	0.35	0.24	7.50	0.60	11.9	6.6	2.29	39	2.43	3.73	4.42	0.31	1958
R+4	19.2	33.4	0.43	0.30	10.80	0.66	15.6	10.7	2.52	60	1.64	5.95	6.30	0.23	2630
R+4	18.8	32.5	0.43	0.30	10.58	0.65	15.6	10.2	2.48	58	1.64	5.59	5.96	0.23	2590
R+6	25.2	25.1	0.44	0.30	13.99	0.86	15.6	10.6	3.26	88	1.64	5.87	6.41	0.29	3465
R+6	26.5	27.5	0.44	0.30	14.67	0.89	15.6	12.1	3.40	94	1.64	6.99	7.45	0.30	3606
R+8	33.2	25.8	0.48	0.33	16.70	0.95	16.9	14.3	3.63	111	1.46	7.93	8.37	0.26	4246
R+8	33.8	25.0	0.48	0.33	16.99	0.96	16.9	14.1	3.66	113	1.46	7.81	8.26	0.27	4291
R+10	41.4	19.2	0.49	0.34	20.39	1.08	18.1	13.3	4.10	144	1.30	6.83	7.37	0.29	4907
R+10	45.4	23.2	0.49	0.34	22.33	1.16	18.1	17.5	4.41	160	1.30	9.45	9.92	0.31	5273
F+2	6.7	3.4	0.24	0.17	6.63	0.54	11.3	0.4	2.05	32	0.00	0.38	0.38	0.58	1218
F+2	6.7	2.5	0.24	0.17	6.61	0.54	11.3	0.3	2.04	31	0.00	0.28	0.28	0.58	1214
F+4	13.8	9.8	0.34	0.23	9.84	0.65	13.8	2.3	2.49	52	0.00	1.82	1.87	0.37	2052
F+4	13.7	9.7	0.34	0.23	9.74	0.65	13.8	2.2	2.47	51	0.00	1.78	1.82	0.36	2034
F+6	21.7	10.6	0.39	0.27	13.37	0.83	14.4	3.8	3.17	77	0.00	2.96	3.04	0.35	3018
F+6	21.3	11.2	0.39	0.27	13.15	0.82	14.4	4.0	3.12	76	0.00	3.06	3.15	0.34	2974
F+8	29.3	12.0	0.40	0.28	17.70	1.00	15.6	5.9	3.81	111	0.00	4.17	4.29	0.40	3707
F+8	29.2	11.3	0.40	0.28	17.66	1.00	15.6	5.5	3.80	111	0.00	3.92	4.03	0.40	3699
F+10	36.3	10.9	0.45	0.31	19.74	1.01	17.5	6.6	3.84	126	0.00	4.17	4.28	0.33	4157
F+10	35.8	10.5	0.45	0.31	19.46	0.99	17.5	6.2	3.79	124	0.00	3.96	4.06	0.32	4105

RILL DATA ANALYSIS SOIL: GRENADA DATE: JUNE 3, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 86.37 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 43.57 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.42 %														
R+0	3.4	69.1	0.18	0.13	4.48	0.59	6.3	3.9	4.86	58	4.62	2.27	0.00	2.49	1225
R+0	3.5	72.5	0.18	0.13	4.66	0.65	6.3	4.2	5.36	67	4.62	2.89	2.21	2.74	1348
R+2	10.9	62.9	0.32	0.22	8.14	0.94	7.5	11.4	7.71	139	3.73	13.13	14.31	1.25	3443
R+2	11.3	64.6	0.32	0.22	8.47	0.96	7.5	12.1	7.87	143	3.73	14.27	15.46	1.28	3516
R+4	19.2	65.2	0.34	0.24	13.56	1.24	8.8	20.9	10.18	245	3.09	23.40	25.20	1.47	4828
R+4	18.2	58.7	0.34	0.24	12.84	1.19	8.8	17.8	9.77	231	3.09	19.49	21.24	1.41	4633
R+6	24.9	66.1	0.41	0.28	14.69	1.16	11.9	27.4	9.56	303	2.09	23.56	24.98	0.96	5426
R+6	24.5	60.2	0.41	0.28	14.46	1.15	11.9	24.6	9.48	299	2.09	20.91	22.28	0.95	5379
R+8	34.0	66.7	0.41	0.28	20.15	1.43	12.5	37.8	11.74	434	1.95	31.64	33.54	1.19	6638
R+8	33.6	74.4	0.41	0.28	19.91	1.42	12.5	41.6	11.70	432	1.95	35.03	37.09	1.19	6615
R+10	42.1	119.3	0.42	0.29	24.47	1.58	13.1	83.7	12.98	530	1.82	69.03	74.21	1.27	7485
R+10	42.6	95.2	0.42	0.29	24.79	1.59	13.1	67.7	13.06	535	1.82	55.46	59.00	1.27	7532
F+2	7.2	47.0	0.26	0.18	6.62	0.76	6.9	5.6	6.28	93	0.00	9.07	9.36	1.55	2281
F+2	7.2	51.4	0.26	0.18	6.61	0.76	6.9	6.1	6.27	93	0.00	9.91	10.25	1.54	2279
F+4	16.1	48.5	0.31	0.21	12.68	1.18	7.5	13.1	9.76	198	0.00	19.34	20.00	1.74	4167
F+4	20.1	38.6	0.31	0.21	15.79	1.37	7.5	12.9	11.31	246	0.00	19.16	19.68	2.02	4828
F+6	21.2	57.4	0.32	0.22	15.93	1.31	8.8	20.3	10.77	267	0.00	25.79	26.82	1.75	4808
F+6	33.5	48.4	0.32	0.22	25.14	1.77	8.8	27.0	14.55	420	0.00	34.30	35.46	2.37	6499
F+8	30.2	65.5	0.34	0.23	21.67	1.54	10.0	32.9	12.66	389	0.00	36.56	38.20	1.89	5909
F+8	31.7	77.0	0.34	0.23	22.75	1.59	10.0	40.6	13.10	410	0.00	45.16	47.56	1.95	6113
F+10	36.4	90.9	0.43	0.30	20.34	1.39	11.3	55.1	11.43	376	0.00	54.43	58.86	1.03	6856
F+10	39.1	90.8	0.43	0.30	21.84	1.46	11.3	59.1	12.07	407	0.00	58.34	63.03	1.09	7237
Rill 2	slope = 8.46 %														
R+0	3.8	59.3	0.20	0.14	4.48	0.55	6.9	3.7	4.58	58	4.13	1.87	0.34	1.88	1282
R+0	3.6	68.0	0.20	0.14	4.33	0.55	6.9	4.1	4.55	58	4.13	2.52	0.07	1.87	1274
R+2	11.4	52.9	0.38	0.26	7.35	0.82	7.5	10.0	6.79	115	3.73	11.10	12.40	0.82	3502
R+2	11.7	75.1	0.38	0.26	7.60	0.84	7.5	14.7	6.95	119	3.73	18.07	18.78	0.84	3588
R+4	19.3	63.2	0.41	0.28	11.52	1.04	10.0	20.4	8.61	218	2.61	20.02	21.65	0.88	4825
R+4	17.4	68.2	0.41	0.28	10.37	0.98	10.0	19.8	8.07	198	2.61	19.38	20.82	0.83	4523
R+6	25.9	69.2	0.40	0.28	15.63	1.16	11.9	29.9	9.60	305	2.09	25.91	27.72	1.01	5320
R+6	27.5	50.2	0.40	0.28	16.55	1.20	11.9	23.0	9.93	321	2.09	19.39	21.06	1.04	5504
R+8	35.5	75.8	0.44	0.30	19.67	1.41	12.5	44.9	11.67	430	1.95	37.95	40.44	1.03	7038
R+8	36.0	87.0	0.44	0.30	19.92	1.42	12.5	52.2	11.75	435	1.95	44.45	47.45	1.04	7088
R+10	45.9	102.4	0.46	0.32	24.17	1.62	12.5	78.3	13.37	528	1.95	67.65	72.81	1.07	8470
R+10	46.0	109.9	0.46	0.32	24.24	1.62	12.5	84.3	13.41	530	1.95	72.98	78.87	1.07	8496

RILL DATA ANALYSIS SOIL: GRENADA DATE: JUNE 3, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 8.46 %														
F+2	7.3	48.8	0.20	0.13	8.90	0.87	8.1	6.0	7.24	137	0.00	8.17	8.36	3.07	1991
F+2	7.3	59.7	0.20	0.13	8.90	0.87	8.1	7.3	7.21	136	0.00	9.95	10.22	3.06	1985
F+4	16.1	50.9	0.32	0.22	12.34	1.08	8.8	13.6	8.95	202	0.00	17.31	17.92	1.52	3893
F+4	20.9	44.9	0.32	0.22	16.05	1.31	8.8	15.6	10.87	271	0.00	19.86	20.45	1.85	4726
F+6	23.3	52.2	0.34	0.23	16.83	1.28	10.0	20.3	10.57	297	0.00	22.50	23.31	1.60	4880
F+6	37.7	40.7	0.34	0.23	27.28	1.80	10.0	25.6	14.87	495	0.00	28.39	29.15	2.25	6862
F+8	33.3	39.0	0.37	0.25	21.83	1.46	11.3	21.6	12.12	410	0.00	21.37	21.96	1.50	6175
F+8	35.7	43.2	0.37	0.25	23.42	1.54	11.3	25.7	12.77	443	0.00	25.40	26.16	1.58	6507
F+10	48.8	55.8	0.39	0.27	30.13	1.77	12.5	45.4	14.62	604	0.00	40.34	41.94	1.61	7907
F+10	42.6	85.6	0.39	0.27	26.32	1.60	12.5	60.8	13.22	519	0.00	54.08	57.53	1.46	7151
Rill 3	slope = 8.42 %														
R+0	3.3	61.7	0.20	0.14	3.96	0.53	6.3	3.4	4.39	50	4.62	1.36	4.12	1.86	1214
R+0	3.3	65.7	0.20	0.14	4.04	0.51	6.3	3.6	4.20	47	4.62	1.86	4.34	1.78	1162
R+2	11.1	64.9	0.35	0.24	7.62	0.84	6.9	12.0	6.88	107	4.13	15.34	17.07	0.93	3374
R+2	10.2	105.1	0.35	0.24	6.98	0.79	6.9	17.9	6.51	99	4.13	24.77	25.75	0.88	3193
R+4	18.1	112.2	0.41	0.28	10.60	0.97	8.8	33.8	7.99	171	3.09	39.87	42.24	0.79	4575
R+4	16.9	137.8	0.41	0.28	9.92	0.94	8.8	38.9	7.71	162	3.09	46.27	49.33	0.76	4410
R+6	22.9	96.4	0.37	0.26	14.84	1.21	10.6	36.8	9.93	287	2.42	36.11	38.37	1.20	5143
R+6	23.7	99.8	0.37	0.26	15.34	1.23	10.6	39.4	10.14	296	2.42	38.81	41.24	1.23	5250
R+8	31.2	73.8	0.40	0.27	18.93	1.30	11.9	38.3	10.71	360	2.09	33.77	35.85	1.14	5911
R+8	35.2	81.2	0.40	0.27	21.40	1.41	11.9	47.7	11.58	404	2.09	42.51	45.09	1.23	6388
R+10	47.7	71.9	0.41	0.28	28.05	1.68	13.1	57.2	13.84	584	1.82	46.61	49.18	1.38	7901
R+10	48.8	50.6	0.41	0.28	28.67	1.70	13.1	41.2	14.01	594	1.82	33.02	34.87	1.40	7995
F+2	8.4	49.7	0.32	0.22	6.34	0.66	8.1	6.9	5.45	89	0.00	9.50	9.89	0.90	2416
F+2	8.3	52.5	0.32	0.22	6.29	0.66	8.1	7.3	5.41	88	0.00	9.95	10.38	0.89	2399
F+4	15.2	103.8	0.34	0.23	10.92	0.94	9.4	26.4	7.78	176	0.00	31.26	33.87	1.15	3643
F+4	21.5	47.7	0.34	0.23	15.41	1.24	9.4	17.1	10.18	263	0.00	20.29	20.98	1.51	4764
F+6	23.8	50.6	0.33	0.22	17.63	1.24	11.3	20.0	10.23	318	0.00	19.79	20.44	1.63	4623
F+6	35.1	51.2	0.33	0.22	26.07	1.67	11.3	30.0	13.74	495	0.00	29.59	30.53	2.18	6210
F+8	36.5	86.1	0.35	0.24	25.16	1.58	11.9	52.3	13.06	484	0.00	48.98	51.84	1.79	6352
F+8	28.8	85.6	0.35	0.24	19.87	1.32	11.9	41.1	10.90	369	0.00	38.49	40.81	1.50	5301
F+10	30.7	108.8	0.39	0.27	19.04	1.24	12.5	55.7	10.21	352	0.00	49.55	53.94	1.13	5529
F+10	40.1	99.7	0.39	0.27	24.84	1.53	12.5	66.6	12.60	483	0.00	59.21	63.71	1.40	6821

RILL DATA ANALYSIS SOIL: GRENADA DATE: JUNE 3, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 8.71 %														
R+0	3.2	59.1	0.20	0.14	3.87	0.52	6.3	3.2	4.45	51	4.62	1.00	0.00	1.87	1197
R+0	3.3	65.2	0.20	0.14	4.03	0.52	6.3	3.6	4.43	50	4.62	1.84	0.00	1.86	1192
R+2	10.0	82.6	0.38	0.26	6.40	0.74	8.1	13.7	6.27	110	3.38	15.36	15.65	0.75	3163
R+2	10.5	83.6	0.38	0.26	6.76	0.77	8.1	14.7	6.52	117	3.38	16.65	17.27	0.78	3292
R+4	19.5	67.4	0.41	0.28	11.53	1.10	8.8	22.0	9.38	217	3.09	24.79	27.14	0.94	5152
R+4	19.5	56.0	0.41	0.28	11.51	1.10	8.8	18.2	9.38	217	3.09	20.02	22.31	0.94	5152
R+6	25.5	82.6	0.42	0.29	14.74	1.30	9.4	35.0	11.04	297	2.84	38.70	41.83	1.07	6180
R+6	25.7	76.1	0.42	0.29	14.90	1.31	9.4	32.6	11.13	301	2.84	35.85	38.80	1.08	6228
R+8	34.2	86.3	0.46	0.32	18.07	1.41	10.6	49.2	12.02	383	2.42	49.08	52.90	0.97	7378
R+8	34.8	117.6	0.46	0.32	18.37	1.42	10.6	68.2	12.06	385	2.42	68.90	75.26	0.97	7404
R+10	45.4	121.9	0.42	0.29	26.40	1.75	11.9	92.2	14.88	589	2.09	84.15	91.37	1.45	8287
R+10	41.6	146.1	0.42	0.29	24.21	1.65	11.9	101.4	14.07	541	2.09	92.76	102.03	1.37	7836
F+2	5.7	79.7	0.27	0.19	5.14	0.59	7.5	7.6	4.99	72	0.00	11.30	11.95	1.15	1806
F+2	7.6	62.8	0.27	0.19	6.77	0.74	7.5	7.9	6.28	102	0.00	11.72	12.20	1.45	2273
F+4	15.9	57.1	0.31	0.21	12.50	1.05	9.4	15.1	8.97	218	0.00	17.95	18.60	1.60	3698
F+4	19.5	84.7	0.31	0.21	15.35	1.23	9.4	27.6	10.50	275	0.00	32.67	34.42	1.87	4329
F+6	23.3	70.9	0.35	0.24	16.39	1.25	10.0	27.6	10.67	301	0.00	30.66	32.16	1.52	4928
F+6	36.1	64.5	0.35	0.24	25.36	1.71	10.0	38.8	14.60	482	0.00	43.15	44.99	2.08	6739
F+8	31.6	104.7	0.40	0.27	19.41	1.38	10.6	55.2	11.76	370	0.00	57.72	62.51	1.28	6213
F+8	32.2	122.4	0.40	0.27	19.76	1.40	10.6	65.7	11.92	378	0.00	68.72	75.50	1.29	6298
F+10	39.7	121.8	0.40	0.27	24.14	1.58	11.3	80.7	13.45	479	0.00	79.66	87.23	1.43	7177
F+10	42.3	70.8	0.40	0.27	25.69	1.65	11.3	49.9	14.07	513	0.00	49.31	51.88	1.50	7508
Rill 5	slope = 8.91 %														
R+0	3.0	88.3	0.18	0.12	4.01	0.56	6.3	4.4	4.88	58	4.62	3.25	0.00	2.51	1159
R+2	10.2	97.5	0.33	0.23	7.52	0.91	6.9	16.6	7.94	133	4.13	22.69	24.97	1.24	3413
R+2	10.5	78.9	0.33	0.23	7.75	0.93	6.9	13.8	8.11	137	4.13	18.25	20.77	1.27	3488
R+4	18.3	75.1	0.37	0.25	12.11	1.21	8.1	22.9	10.51	239	3.38	27.88	31.06	1.33	5021
R+4	17.4	76.5	0.37	0.25	11.52	1.18	8.1	22.1	10.25	230	3.38	26.89	29.99	1.30	4896
R+6	24.1	102.4	0.37	0.25	15.87	1.38	9.4	41.1	12.04	338	2.84	45.90	50.06	1.51	5789
R+6	23.7	86.4	0.37	0.25	15.64	1.37	9.4	34.2	11.91	333	2.84	37.68	41.17	1.49	5726
R+8	35.2	129.0	0.43	0.29	19.97	1.46	10.0	75.6	12.73	393	2.61	81.38	90.32	1.19	7101
R+8	33.3	163.9	0.43	0.29	18.89	1.42	10.0	90.8	12.39	376	2.61	98.31	111.49	1.15	6907
R+10	38.8	223.5	0.37	0.25	25.39	1.66	11.3	144.4	14.44	533	2.24	140.38	162.40	1.79	6981
R+10	35.8	178.3	0.37	0.25	23.47	1.59	11.3	106.5	13.87	502	2.24	102.92	115.34	1.72	6707

RILL DATA ANALYSIS SOIL: GRENADA DATE: JUNE 3, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 5	slope = 8.91 %														
F+2	7.3	102.4	0.25	0.17	7.00	0.72	8.1	12.4	6.27	110	0.00	17.02	18.06	1.67	2068
F+2	7.8	107.5	0.25	0.17	7.49	0.76	8.1	14.0	6.63	120	0.00	19.11	20.32	1.76	2187
F+4	15.5	116.5	0.29	0.20	12.77	1.07	9.4	30.0	9.33	231	0.00	35.55	38.09	1.84	3576
F+4	20.1	46.4	0.29	0.20	16.62	1.31	9.4	15.5	11.39	311	0.00	18.41	18.89	2.25	4367
F+6	22.9	96.2	0.29	0.20	19.34	1.42	10.0	36.7	12.36	375	0.00	40.76	42.89	2.55	4630
F+6	35.0	85.3	0.29	0.20	29.56	1.89	10.0	49.7	16.50	579	0.00	55.23	57.75	3.40	6182
F+8	31.1	90.0	0.33	0.23	23.00	1.56	10.6	46.6	13.63	462	0.00	48.74	51.38	2.16	5833
F+8	32.4	77.4	0.33	0.23	23.98	1.61	10.6	41.8	14.04	483	0.00	43.71	45.71	2.22	6009
F+10	33.4	90.0	0.36	0.24	22.74	1.51	11.3	50.1	13.16	464	0.00	49.45	52.33	1.76	6121
F+10	37.9	91.2	0.36	0.24	25.82	1.66	11.3	57.6	14.45	534	0.00	56.92	60.24	1.94	6718
Rill 6	slope = 9.13 %														
R+0	3.2	62.1	0.19	0.13	4.18	0.60	5.6	3.3	5.32	60	5.21	1.31	0.76	2.64	1256
R+0	3.2	64.1	0.19	0.13	4.19	0.63	5.6	3.4	5.63	65	5.21	1.53	2.46	2.79	1328
R+2	9.5	77.1	0.30	0.21	7.60	0.91	6.9	12.2	8.09	137	4.13	15.53	17.08	1.51	3114
R+2	8.8	76.7	0.30	0.21	7.06	0.86	6.9	11.2	7.69	127	4.13	14.03	15.35	1.43	2959
R+4	15.9	78.8	0.34	0.24	11.30	0.97	8.8	20.9	8.62	191	3.09	23.51	24.90	1.25	3762
R+4	15.1	55.2	0.34	0.24	10.73	0.95	8.8	13.9	8.49	187	3.09	14.61	16.22	1.23	3703
R+6	26.4	69.0	0.38	0.26	16.66	1.11	9.4	30.3	9.87	251	2.84	33.12	35.21	1.14	4837
R+6	25.8	89.4	0.38	0.26	16.27	1.09	9.4	38.4	9.74	246	2.84	42.68	45.27	1.12	4772
R+8	32.4	124.3	0.40	0.27	19.66	1.51	10.6	67.2	13.49	455	2.42	67.83	72.87	1.43	6879
R+8	33.2	90.1	0.40	0.27	20.16	1.54	10.6	49.9	13.72	466	2.42	49.79	53.05	1.46	6993
R+10	43.4	111.6	0.40	0.27	26.53	1.73	12.5	80.8	15.46	656	1.95	69.85	74.56	1.67	7824
R+10	44.2	108.9	0.40	0.27	27.02	1.75	12.5	80.3	15.64	668	1.95	69.44	74.05	1.69	7915
F+2	6.2	38.3	0.23	0.16	6.47	0.71	7.5	3.9	6.34	103	0.00	5.84	5.95	2.02	1867
F+2	6.5	44.9	0.23	0.16	6.83	0.74	7.5	4.9	6.63	111	0.00	7.21	7.38	2.11	1952
F+4	14.1	18.8	0.28	0.19	12.12	1.11	8.1	4.4	9.90	218	0.00	6.06	6.12	2.10	3570
F+4	17.8	89.2	0.28	0.19	15.27	1.31	8.1	26.5	11.68	280	0.00	36.19	38.02	2.48	4212
F+6	26.0	64.8	0.30	0.20	21.30	1.59	8.8	28.1	14.23	406	0.00	35.69	36.98	2.75	5373
F+6	36.6	76.3	0.30	0.20	29.99	1.96	8.8	46.6	17.49	553	0.00	59.16	61.80	3.38	6604
F+8	32.4	51.9	0.36	0.25	21.86	1.55	10.0	28.0	13.82	444	0.00	31.15	32.18	1.82	6331
F+8	32.4	70.9	0.36	0.25	21.85	1.55	10.0	38.3	13.81	443	0.00	42.52	44.47	1.82	6329
F+10	39.6	86.4	0.42	0.29	22.86	1.52	11.3	57.0	13.54	484	0.00	56.34	59.95	1.30	7258
F+10	42.8	119.4	0.42	0.29	24.68	1.60	11.3	85.1	14.33	527	0.00	84.08	91.71	1.38	7678

RILL DATA ANALYSIS SOIL: TIFTON DATE: JUNE 6, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 107.30 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 13.07 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.54 %														
R+2	10.0	14.4	0.31	0.17	9.86	0.75	12.5	2.4	3.33	82	0.58	1.55	1.87	0.93	2631
R+2	10.6	19.7	0.31	0.17	10.39	0.77	12.5	3.5	3.42	85	0.58	2.50	2.78	0.95	2701
R+4	17.0	29.3	0.42	0.23	12.39	0.86	12.5	8.3	3.82	100	0.58	6.81	7.19	0.58	4070
R+4	17.0	21.0	0.42	0.23	12.37	0.86	12.5	5.9	3.82	100	0.58	4.70	5.07	0.58	4070
R+6	25.3	26.9	0.53	0.29	14.59	0.91	14.4	11.3	4.04	125	0.48	8.29	8.76	0.39	5445
R+6	25.5	37.0	0.53	0.29	14.70	0.92	14.4	15.8	4.09	128	0.48	11.70	12.40	0.39	5505
R+8	22.5	25.0	0.60	0.33	11.28	0.82	15.6	9.4	3.64	117	0.42	6.24	6.50	0.26	5632
R+8	34.5	28.5	0.60	0.33	17.32	1.09	15.6	16.4	4.84	179	0.42	11.22	11.91	0.35	7486
R+10	32.7	54.2	0.68	0.38	14.44	0.92	15.6	29.5	4.09	139	0.42	20.56	22.57	0.23	7169
R+10	42.0	34.9	0.68	0.38	18.57	1.09	15.6	24.4	4.84	179	0.42	16.96	18.22	0.27	8493
F+2	5.3	32.2	0.33	0.18	4.82	0.40	11.3	2.9	1.78	29	0.00	2.82	2.97	0.42	1518
F+2	5.8	27.3	0.33	0.18	5.27	0.43	11.3	2.6	1.93	32	0.00	2.61	2.72	0.46	1648
F+4	13.7	63.8	0.46	0.25	9.01	0.65	12.5	14.6	2.89	66	0.00	12.97	14.66	0.36	3413
F+4	13.3	35.2	0.46	0.25	8.71	0.63	12.5	7.8	2.80	63	0.00	6.92	7.38	0.35	3313
F+6	22.6	35.1	0.55	0.30	12.41	0.83	13.1	13.3	3.70	100	0.00	11.22	12.03	0.32	5237
F+6	22.3	29.6	0.55	0.30	12.23	0.82	13.1	11.0	3.65	98	0.00	9.32	9.88	0.32	5171
F+8	30.0	34.6	0.63	0.35	14.45	0.95	13.1	17.3	4.22	122	0.00	14.67	15.81	0.28	6814
F+8	30.5	43.7	0.63	0.35	14.68	0.96	13.1	22.2	4.28	125	0.00	18.82	20.72	0.29	6909
F+10	38.4	34.5	0.63	0.34	18.58	1.18	13.1	22.1	5.23	168	0.00	18.67	20.01	0.35	8380
F+10	39.5	33.5	0.63	0.34	19.12	1.21	13.1	22.1	5.35	175	0.00	18.68	19.97	0.36	8582
Rill 2	slope = 4.70 %														
R+2	9.9	17.5	0.34	0.19	8.77	0.73	12.5	2.9	3.36	83	0.58	1.99	1.86	0.76	2836
R+2	10.2	15.6	0.34	0.19	9.01	0.74	12.5	2.6	3.41	84	0.58	1.77	1.83	0.77	2875
R+4	17.6	21.8	0.41	0.23	12.97	0.95	13.1	6.4	4.37	129	0.55	4.85	5.30	0.69	4431
R+4	16.8	24.1	0.41	0.23	12.43	0.92	13.1	6.7	4.23	123	0.55	5.17	5.59	0.67	4291
R+6	23.6	30.3	0.49	0.27	14.46	0.95	13.8	11.9	4.37	135	0.51	9.14	9.69	0.47	5352
R+6	23.5	30.3	0.49	0.27	14.39	0.97	13.8	11.9	4.46	139	0.51	9.10	9.67	0.48	5465
R+8	30.5	26.6	0.64	0.35	14.49	0.98	15.6	13.6	4.51	161	0.42	9.22	9.77	0.29	7117
R+8	32.9	40.7	0.64	0.35	15.63	1.01	15.6	22.4	4.65	168	0.42	15.48	16.58	0.30	7335
R+10	33.1	36.1	0.76	0.42	13.10	0.87	15.6	19.9	4.00	134	0.42	13.74	14.55	0.18	7574
R+10	39.3	54.0	0.76	0.42	15.56	1.01	15.6	35.4	4.65	168	0.42	24.73	27.41	0.21	8792

RILL DATA ANALYSIS SOIL: TIFTON DATE: JUNE 6, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 4.70 %														
F+2	5.7	24.9	0.36	0.20	4.80	0.40	11.3	2.4	1.83	30	0.00	2.35	2.45	0.37	1643
F+2	5.6	25.1	0.36	0.20	4.71	0.39	11.3	2.4	1.80	29	0.00	2.33	2.43	0.36	1614
F+4	10.0	33.2	0.51	0.28	5.89	0.44	12.5	5.5	2.03	39	0.00	4.91	5.30	0.20	2572
F+4	13.5	30.5	0.51	0.28	7.96	0.58	12.5	6.9	2.68	59	0.00	6.10	6.49	0.27	3395
F+6	20.1	42.7	0.56	0.31	10.77	0.76	12.5	14.3	3.51	88	0.00	12.73	13.89	0.29	4907
F+6	20.5	44.3	0.56	0.31	11.01	0.78	12.5	15.2	3.58	91	0.00	13.50	14.77	0.30	5003
F+8	28.2	37.9	0.62	0.34	13.75	0.94	12.5	17.8	4.35	122	0.00	15.85	17.14	0.30	6674
F+8	29.3	35.0	0.62	0.34	14.30	0.98	12.5	17.1	4.49	128	0.00	15.20	16.32	0.31	6900
F+10	35.6	51.3	0.64	0.35	16.89	1.09	13.1	30.4	5.00	158	0.00	25.76	28.63	0.32	7892
F+10	36.7	54.7	0.64	0.35	17.42	1.12	13.1	33.5	5.13	164	0.00	28.33	31.69	0.33	8103
Rill 3	slope = 4.86 %														
R+2	9.8	6.0	0.36	0.20	8.36	0.71	11.3	1.0	3.25	71	0.67	0.29	0.00	0.68	2874
R+2	10.6	7.8	0.36	0.20	9.01	0.75	11.3	1.4	3.44	77	0.67	0.69	0.70	0.72	3036
R+4	17.4	13.6	0.45	0.25	11.68	0.91	12.5	3.9	4.17	114	0.58	2.91	3.33	0.55	4658
R+4	16.8	21.0	0.45	0.25	11.33	0.89	12.5	5.9	4.08	111	0.58	4.66	4.99	0.53	4556
R+6	23.7	15.8	0.51	0.28	13.99	0.95	12.5	6.2	4.35	122	0.58	4.96	5.38	0.44	5544
R+6	25.7	16.2	0.51	0.28	15.19	1.01	12.5	7.0	4.63	134	0.58	5.60	6.08	0.47	5894
R+8	32.2	16.7	0.62	0.34	15.81	0.90	13.8	9.0	4.13	124	0.51	6.72	7.05	0.29	6315
R+8	33.5	22.4	0.62	0.34	16.47	0.91	13.8	12.5	4.17	126	0.51	9.63	10.05	0.29	6385
R+10	32.1	30.8	0.63	0.35	15.32	0.93	13.8	16.5	4.26	130	0.51	12.81	13.47	0.28	6718
R+10	40.2	45.6	0.63	0.35	19.19	1.03	13.8	30.6	4.72	151	0.51	24.20	26.55	0.31	7441
F+2	5.7	31.6	0.38	0.21	4.52	0.38	11.3	3.0	1.72	27	0.00	2.96	3.13	0.31	1634
F+2	6.1	31.0	0.38	0.21	4.85	0.40	11.3	3.2	1.84	30	0.00	3.11	3.29	0.34	1746
F+4	10.2	20.7	0.50	0.27	6.24	0.46	12.5	3.5	2.13	42	0.00	3.14	3.28	0.23	2623
F+4	12.2	18.4	0.50	0.27	7.43	0.55	12.5	3.7	2.50	53	0.00	3.32	3.44	0.27	3083
F+6	21.2	29.3	0.56	0.31	11.37	0.80	12.5	10.4	3.67	94	0.00	9.21	9.75	0.30	5147
F+6	22.2	29.6	0.56	0.31	11.88	0.83	12.5	10.9	3.81	100	0.00	9.73	10.30	0.32	5347
F+8	28.9	43.2	0.58	0.32	15.05	0.95	13.8	20.8	4.37	135	0.00	16.83	18.28	0.34	6308
F+8	30.0	38.6	0.58	0.32	15.60	0.98	13.8	19.3	4.50	141	0.00	15.58	16.75	0.35	6506
F+10	38.4	36.9	0.60	0.33	19.50	1.19	13.8	23.6	5.45	188	0.00	19.10	20.42	0.40	8070
F+10	38.0	31.1	0.60	0.33	19.29	1.18	13.8	19.7	5.40	185	0.00	15.92	16.83	0.40	8000

RILL DATA ANALYSIS SOIL: TIFTON DATE: JUNE 6, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 5.05 %														
R+2	9.7	11.6	0.32	0.17	9.26	0.86	9.4	1.9	4.25	88	0.85	1.36	1.61	1.13	3090
R+2	9.1	11.9	0.32	0.17	8.76	0.83	9.4	1.8	4.10	84	0.85	1.29	0.83	1.09	2982
R+4	16.1	16.9	0.42	0.23	11.46	0.91	12.5	4.5	4.50	128	0.58	3.46	3.67	0.66	4404
R+4	16.2	13.1	0.42	0.23	11.51	0.91	12.5	3.5	4.50	128	0.58	2.55	2.84	0.66	4404
R+6	24.9	18.6	0.51	0.28	14.73	0.94	13.1	7.7	4.64	141	0.55	6.00	6.21	0.47	5472
R+6	24.0	16.5	0.51	0.28	14.23	0.92	13.1	6.6	4.55	137	0.55	5.05	5.21	0.46	5355
R+8	30.9	14.5	0.56	0.31	16.67	0.98	14.4	7.5	4.84	164	0.48	5.29	5.59	0.41	6259
R+8	31.9	12.0	0.56	0.31	17.22	1.01	14.4	6.4	4.99	172	0.48	4.47	4.82	0.42	6451
R+10	31.1	12.2	0.66	0.36	14.27	0.89	14.4	6.4	4.40	142	0.48	4.44	4.46	0.27	6691
R+10	38.4	37.3	0.66	0.36	17.59	1.03	14.4	23.9	5.09	177	0.48	17.98	18.99	0.31	7743
F+2	4.9	38.8	0.35	0.19	4.21	0.35	11.3	3.1	1.74	28	0.00	3.11	3.30	0.38	1402
F+2	5.0	48.8	0.35	0.19	4.36	0.36	11.3	4.1	1.80	29	0.00	4.05	4.36	0.39	1451
F+4	13.1	29.9	0.48	0.27	8.19	0.60	12.5	6.5	2.95	68	0.00	5.79	6.09	0.33	3279
F+4	12.9	31.2	0.48	0.27	8.06	0.59	12.5	6.7	2.90	66	0.00	5.95	6.27	0.33	3232
F+6	20.0	33.5	0.56	0.31	10.81	0.77	12.5	11.2	3.78	99	0.00	9.96	10.57	0.32	4891
F+6	20.9	45.8	0.56	0.31	11.25	0.79	12.5	15.9	3.92	104	0.00	14.17	15.37	0.33	5067
F+8	27.9	42.5	0.61	0.34	13.78	0.95	12.5	19.7	4.67	136	0.00	17.53	18.95	0.33	6588
F+8	29.0	30.0	0.61	0.34	14.33	0.98	12.5	14.5	4.83	143	0.00	12.87	13.58	0.34	6815
F+10	35.6	43.9	0.61	0.33	17.78	1.14	13.1	26.1	5.61	187	0.00	22.07	23.77	0.40	7827
F+10	36.4	29.2	0.61	0.33	18.18	1.16	13.1	17.7	5.71	192	0.00	15.02	15.76	0.41	7974
Rill 5	slope = 4.21 %														
R+6	26.2	6.2	0.45	0.25	17.47	1.19	12.5	2.7	4.90	146	0.58	1.81	2.12	0.63	6137
R+8	31.4	8.4	0.56	0.31	16.92	1.10	12.5	4.4	4.53	130	0.58	3.31	3.47	0.38	7038
R+8	34.9	5.6	0.56	0.31	18.78	1.13	12.5	3.3	4.66	135	0.58	2.31	2.57	0.39	7230
R+10	30.9	11.1	0.64	0.35	14.55	0.93	13.1	5.7	3.83	106	0.55	4.27	4.33	0.25	6804
R+10	41.2	14.6	0.64	0.35	19.42	1.16	13.1	10.1	4.78	147	0.55	7.97	7.78	0.31	8487
F+2	4.6	18.9	0.31	0.17	4.51	0.49	8.1	1.5	2.03	25	0.00	2.00	2.06	0.55	1745
F+2	4.6	14.1	0.31	0.17	4.50	0.49	8.1	1.1	2.03	25	0.00	1.49	1.52	0.55	1743
F+4	12.0	10.7	0.43	0.24	8.41	0.84	8.1	2.1	3.44	56	0.00	2.92	2.97	0.49	4097
F+4	11.7	10.5	0.43	0.24	8.20	0.82	8.1	2.1	3.37	54	0.00	2.81	2.86	0.48	4015
F+6	22.1	8.5	0.53	0.29	12.56	1.10	8.8	3.1	4.52	90	0.00	3.97	4.04	0.42	6655
F+6	23.6	8.8	0.53	0.29	13.40	1.15	8.8	3.5	4.74	97	0.00	4.41	4.49	0.44	6988
F+8	29.1	12.0	0.55	0.30	15.98	1.23	10.0	5.8	5.06	122	0.00	6.50	6.66	0.44	7715
F+8	30.3	15.1	0.55	0.30	16.62	1.27	10.0	7.6	5.21	128	0.00	8.47	8.73	0.45	7946
F+10	38.9	16.7	0.60	0.33	19.68	1.35	11.3	10.9	5.57	159	0.00	10.72	11.10	0.41	9207
F+10	39.3	16.2	0.60	0.33	19.89	1.36	11.3	10.6	5.62	161	0.00	10.50	10.86	0.42	9285

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RILL DATA ANALYSIS SOIL: TIFTON DATE: JUNE 6, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 6	slope = 4.01 %														
R+6	24.5	27.4	0.43	0.24	17.18	1.16	12.5	11.2	4.55	130	0.58	9.38	9.38	0.64	5711
R+8	31.0	50.9	0.53	0.29	17.80	1.10	13.1	26.3	4.32	126	0.55	21.74	21.74	0.40	6606
R+8	33.4	31.3	0.53	0.29	19.14	1.11	13.1	17.4	4.36	128	0.55	14.17	14.17	0.41	6666
F+2	5.0	32.4	0.24	0.13	6.26	0.65	8.1	2.7	2.57	36	0.00	3.71	0.00	1.15	1806
F+2	5.7	20.9	0.24	0.13	7.09	0.73	8.1	2.0	2.85	42	0.00	2.71	0.00	1.28	2008
F+4	13.8	7.4	0.41	0.23	10.13	0.97	8.1	1.7	3.80	65	0.00	2.32	2.35	0.59	4540
F+4	13.4	6.4	0.41	0.23	9.83	0.95	8.1	1.4	3.71	62	0.00	1.97	1.99	0.58	4436
F+6	20.3	12.3	0.48	0.26	12.90	1.12	8.8	4.2	4.39	86	0.00	5.30	5.43	0.51	6074
F+6	21.3	12.7	0.48	0.26	13.50	1.16	8.8	4.5	4.54	91	0.00	5.73	5.88	0.53	6283
F+8	28.4	27.3	0.52	0.29	16.60	1.26	10.0	12.9	4.96	119	0.00	14.38	15.23	0.49	7455
F+8	28.5	27.8	0.52	0.29	16.63	1.27	10.0	13.2	4.97	119	0.00	14.63	15.51	0.49	7464
F+10	37.1	20.9	0.54	0.30	20.91	1.42	11.3	12.9	5.56	158	0.00	12.75	13.30	0.51	8671
F+10	36.7	29.8	0.54	0.30	20.67	1.40	11.3	18.3	5.51	156	0.00	18.03	19.17	0.50	8594

RILL DATA ANALYSIS SOIL: BONIFAY DATE: JUNE 7, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 120.80 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 15.69 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.23 %														
R+2	3.6	30.5	0.35	0.19	3.18	0.37	9.3	1.9	1.53	21	1.04	1.19	0.00	0.34	1461
R+2	4.4	19.5	0.35	0.19	3.81	0.43	9.3	1.4	1.78	27	1.04	0.67	0.00	0.39	1698
R+4	11.7	89.9	0.42	0.23	8.40	0.64	10.5	17.5	2.65	55	0.88	17.62	21.10	0.40	3065
R+4	12.4	69.5	0.42	0.23	8.90	0.67	10.5	14.3	2.77	59	0.88	14.28	16.62	0.41	3209
R+6	21.1	74.0	0.56	0.31	11.29	0.76	12.0	26.0	3.15	81	0.74	23.33	28.20	0.26	4886
R+6	21.1	71.7	0.56	0.31	11.28	0.76	12.0	25.1	3.15	81	0.74	22.54	27.09	0.26	4886
R+8	26.7	73.2	0.59	0.33	13.66	0.78	13.3	32.6	3.23	93	0.65	26.68	32.84	0.24	5252
R+8	29.8	63.6	0.59	0.33	15.26	0.86	13.3	31.6	3.56	107	0.65	25.84	30.77	0.27	5790
R+10	34.3	149.9	0.65	0.36	16.04	0.86	15.3	85.8	3.56	124	0.53	61.99	104.01	0.22	6340
R+10	38.9	94.4	0.65	0.36	18.18	0.95	15.3	61.2	3.93	144	0.53	44.06	57.29	0.25	7003
F+4	9.1	60.6	0.44	0.24	6.30	0.41	14.8	9.2	1.68	39	0.00	6.91	7.89	0.23	2012
F+4	9.6	54.4	0.44	0.24	6.64	0.43	14.8	8.7	1.76	42	0.00	6.53	7.32	0.25	2115
F+6	18.9	47.9	0.53	0.29	10.80	0.61	16.5	15.1	2.52	80	0.00	10.18	11.29	0.24	3678
F+6	18.1	46.6	0.53	0.29	10.35	0.59	16.5	14.1	2.42	75	0.00	9.48	10.50	0.23	3534
F+8	27.8	55.2	0.53	0.29	15.84	0.87	16.4	25.6	3.60	135	0.00	17.37	19.25	0.34	5267
F+8	26.3	53.4	0.53	0.29	14.98	0.83	16.4	23.4	3.43	126	0.00	15.88	17.57	0.32	5009
F+10	31.7	70.7	0.60	0.33	15.99	0.88	16.3	37.3	3.66	137	0.00	25.53	29.79	0.27	6035
F+10	29.7	72.5	0.60	0.33	14.96	0.83	16.3	35.8	3.45	126	0.00	24.50	28.85	0.25	5684
Rill 2	slope = 3.57 %														
R+2	4.0	75.8	0.34	0.19	3.61	0.38	10.3	5.1	1.33	19	0.91	4.62	5.61	0.31	1464
R+2	4.4	88.1	0.34	0.19	3.94	0.41	10.3	6.5	1.43	21	0.91	6.10	7.43	0.33	1579
R+4	11.9	87.5	0.44	0.24	8.29	0.66	10.0	17.4	2.31	42	0.94	18.40	23.58	0.32	3275
R+4	11.6	89.3	0.44	0.24	8.03	0.64	10.0	17.2	2.24	40	0.94	18.18	23.50	0.31	3176
R+6	7.7	61.7	0.55	0.30	4.27	0.38	12.1	8.0	1.33	22	0.73	6.57	8.01	0.12	2372
R+6	19.2	54.2	0.55	0.30	10.59	0.75	12.1	17.3	2.62	62	0.73	15.16	18.04	0.23	4681
R+8	26.9	67.9	0.66	0.36	12.36	0.75	15.6	30.4	2.62	80	0.51	21.10	26.52	0.16	5614
R+8	26.4	87.8	0.66	0.36	12.15	0.73	15.6	38.6	2.55	77	0.51	26.96	37.08	0.16	5464
R+10	32.1	94.4	0.66	0.37	14.61	0.79	15.8	50.5	2.76	87	0.50	35.12	51.75	0.17	5979
R+10	36.2	55.7	0.66	0.37	16.49	0.88	15.8	33.6	3.08	103	0.50	23.22	28.21	0.18	6660
F+4	8.8	74.5	0.43	0.24	6.24	0.43	13.6	10.9	1.51	30	0.00	8.93	11.06	0.22	2097
F+4	8.9	37.5	0.43	0.24	6.31	0.44	13.6	5.6	1.52	31	0.00	4.54	5.01	0.22	2117
F+6	16.0	42.9	0.54	0.30	8.95	0.56	14.8	11.4	1.97	49	0.00	8.58	9.76	0.18	3460
F+6	15.5	59.3	0.54	0.30	8.70	0.55	14.8	15.3	1.92	47	0.00	11.55	13.96	0.17	3370

RILL DATA ANALYSIS SOIL: BONIFAY DATE: JUNE 7, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 3.57 %														
F+8	25.0	76.8	0.64	0.35	11.77	0.71	15.3	32.0	2.47	71	0.00	23.32	30.95	0.16	515
F+8	24.3	55.4	0.64	0.35	11.44	0.69	15.3	22.4	2.40	69	0.00	16.36	19.81	0.15	502
F+10	31.6	78.5	0.65	0.36	14.78	0.84	15.8	41.3	2.95	97	0.00	29.17	38.08	0.19	621
F+10	34.4	83.2	0.65	0.36	16.11	0.91	15.8	47.7	3.19	108	0.00	33.67	44.40	0.20	671
Rill 3	slope = 3.92 %														
R+2	1.9	46.1	0.34	0.19	1.69	0.22	8.3	1.5	0.84	8	1.20	0.79	0.00	0.19	86
R+2	2.8	49.3	0.34	0.19	2.49	0.30	8.3	2.3	1.15	12	1.20	1.94	2.76	0.26	117
R+4	10.4	110.9	0.51	0.28	6.16	0.53	10.1	19.2	2.03	35	0.93	20.16	28.47	0.21	308
R+4	10.6	91.3	0.51	0.28	6.29	0.54	10.1	16.1	2.07	36	0.93	16.78	22.10	0.21	314
R+6	19.5	92.5	0.62	0.34	9.48	0.67	11.3	30.1	2.57	56	0.81	28.94	41.05	0.17	475
R+6	18.7	86.4	0.62	0.34	9.07	0.64	11.3	26.9	2.45	52	0.81	25.76	35.83	0.17	454
R+8	27.1	89.6	0.72	0.40	11.35	0.70	13.9	40.5	2.68	74	0.61	31.84	45.77	0.14	576
R+8	27.2	90.3	0.72	0.40	11.39	0.70	13.9	41.0	2.68	74	0.61	32.21	46.56	0.14	576
R+10	31.8	109.5	0.72	0.40	13.36	0.80	16.9	58.0	3.07	110	0.45	37.72	53.42	0.16	655
R+10	34.7	63.9	0.72	0.40	14.60	0.87	16.9	36.9	3.34	124	0.45	23.87	28.52	0.17	712
F+4	6.6	86.8	0.46	0.25	4.35	0.30	14.0	9.5	1.15	21	0.00	7.56	10.12	0.14	155
F+4	7.6	64.5	0.46	0.25	5.04	0.34	14.0	8.2	1.32	26	0.00	6.49	7.82	0.17	178
F+6	16.0	72.8	0.58	0.32	8.37	0.51	15.4	19.4	1.96	51	0.00	14.01	17.63	0.16	335
F+6	16.0	76.3	0.58	0.32	8.36	0.51	15.4	20.3	1.96	51	0.00	14.67	18.72	0.15	335
F+8	24.7	91.6	0.71	0.39	10.44	0.65	14.8	37.6	2.49	70	0.00	28.35	40.66	0.13	528
F+8	23.9	67.4	0.71	0.39	10.12	0.63	14.8	26.9	2.42	67	0.00	20.24	25.85	0.13	513
F+10	30.7	102.9	0.72	0.40	12.89	0.75	15.8	52.6	2.86	92	0.00	37.10	55.01	0.15	611
F+10	32.2	61.1	0.72	0.40	13.54	0.78	15.8	32.8	2.99	98	0.00	23.15	28.16	0.15	639
Rill 4	slope = 3.96 %														
R+2	3.0	30.2	0.32	0.18	2.82	0.36	8.5	1.5	1.39	17	1.15	0.81	0.00	0.36	131
R+4	10.3	72.7	0.47	0.26	6.58	0.54	10.0	12.4	2.09	37	0.94	12.85	15.79	0.25	289
R+4	9.8	121.7	0.47	0.26	6.32	0.53	10.0	20.0	2.05	35	0.94	21.24	29.92	0.24	284
R+6	17.5	85.3	0.55	0.30	9.63	0.70	12.5	24.9	2.71	67	0.70	21.42	26.89	0.24	438
R+6	18.8	77.9	0.55	0.30	10.36	0.74	12.5	24.5	2.86	73	0.70	21.04	25.86	0.25	463
R+8	25.2	92.0	0.61	0.34	12.48	0.72	16.0	38.6	2.79	90	0.49	26.29	34.35	0.20	500
R+8	27.4	93.1	0.61	0.34	13.60	0.78	16.0	42.6	3.02	101	0.49	29.06	37.73	0.21	541
R+10	30.9	126.0	0.66	0.36	14.12	0.77	16.6	64.9	2.98	103	0.46	42.90	66.97	0.18	580
R+10	32.7	96.0	0.66	0.36	14.94	0.81	16.6	52.3	3.14	111	0.46	34.51	46.55	0.19	611
F+4	7.8	110.7	0.45	0.25	5.20	0.32	15.5	14.4	1.25	26	0.00	10.33	15.01	0.16	166
F+4	8.7	75.9	0.45	0.25	5.77	0.36	15.5	11.0	1.38	30	0.00	7.86	9.75	0.18	184
F+6	15.3	115.0	0.59	0.32	7.89	0.45	16.6	29.3	1.74	46	0.00	19.56	30.97	0.13	300

RILL DATA ANALYSIS SOIL: BONIFAY DATE: JUNE 7, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 3.96 %														
F+6	15.1	99.3	0.59	0.32	7.81	0.45	16.6	25.0	1.73	46	0.00	16.71	24.23	0.13	2973
F+8	24.1	99.6	0.61	0.33	11.99	0.68	16.3	39.9	2.63	84	0.00	27.30	37.08	0.19	4703
F+8	23.2	63.9	0.61	0.33	11.56	0.66	16.3	24.7	2.55	80	0.00	16.91	20.24	0.18	4550
F+10	30.2	77.7	0.66	0.36	13.80	0.75	16.8	39.0	2.92	101	0.00	25.89	32.72	0.18	5680
F+10	30.2	68.5	0.66	0.36	13.82	0.76	16.8	34.5	2.92	101	0.00	22.87	27.96	0.18	5684
Rill 5	slope = 3.99 %														
R+2	3.3	63.7	0.34	0.19	2.97	0.35	9.1	3.6	1.37	18	1.06	3.27	4.25	0.31	1357
R+2	3.5	66.0	0.34	0.19	3.15	0.37	9.1	3.9	1.45	19	1.06	3.70	4.72	0.33	1434
R+4	10.7	125.2	0.45	0.25	7.13	0.61	11.1	22.3	2.38	49	0.82	21.48	27.90	0.31	3156
R+4	10.6	98.4	0.45	0.25	7.08	0.60	11.1	17.4	2.34	48	0.82	16.60	20.40	0.30	3104
R+6	22.0	72.5	0.61	0.34	10.85	0.71	14.0	26.6	2.77	78	0.60	20.52	24.95	0.19	4966
R+6	21.2	82.9	0.61	0.34	10.44	0.69	14.0	29.3	2.70	75	0.60	22.65	28.42	0.19	4826
R+8	29.7	95.2	0.66	0.36	13.72	0.81	17.8	47.2	3.16	121	0.42	29.12	36.66	0.19	6050
R+8	29.6	62.1	0.66	0.36	13.66	0.81	17.8	30.6	3.16	121	0.42	18.75	21.68	0.19	6050
R+10	36.8	37.4	0.72	0.40	15.35	0.86	20.5	22.9	3.36	152	0.33	12.11	13.30	0.17	7098
R+10	37.9	37.6	0.72	0.40	15.83	0.88	20.5	23.8	3.44	158	0.33	12.56	13.78	0.17	7263
F+4	7.0	57.7	0.42	0.23	5.11	0.29	17.0	6.8	1.14	25	0.00	4.42	0.00	0.17	1378
F+4	7.4	59.9	0.42	0.23	5.39	0.31	17.0	7.4	1.20	27	0.00	4.84	0.00	0.18	1452
F+6	18.8	77.9	0.57	0.31	10.04	0.54	17.4	24.5	2.13	65	0.00	15.64	19.62	0.17	3518
F+6	15.7	71.4	0.57	0.31	8.36	0.46	17.4	18.7	1.79	50	0.00	11.94	14.94	0.15	2959
F+8	28.4	99.1	0.62	0.34	13.92	0.67	19.4	46.9	2.62	100	0.00	26.90	36.37	0.18	4724
F+8	24.3	95.1	0.62	0.34	11.88	0.58	19.4	38.5	2.26	80	0.00	22.06	30.12	0.16	4072
Rill 6	slope = 4.23 %														
R+2	3.8	19.1	0.36	0.20	3.25	0.35	10.0	1.2	1.45	21	0.94	0.42	0.42	0.30	1429
R+2	4.7	17.2	0.36	0.20	3.94	0.42	10.0	1.3	1.74	28	0.94	0.55	1.12	0.36	1715
R+4	10.6	27.4	0.46	0.25	6.97	0.57	10.0	4.8	2.36	44	0.94	4.42	5.02	0.30	2976
R+4	11.3	87.0	0.46	0.25	7.43	0.60	10.0	16.3	2.48	47	0.94	17.20	19.58	0.31	3132
R+6	15.6	42.9	0.58	0.32	8.09	0.61	13.1	11.1	2.52	64	0.65	8.76	9.57	0.20	4039
R+8	28.5	31.1	0.72	0.40	11.91	0.74	15.1	14.7	3.06	98	0.53	10.30	11.24	0.15	6093
F+2	9.2	62.1	0.48	0.26	5.84	0.39	14.1	9.5	1.62	35	0.00	7.50	8.74	0.19	2129
F+2	8.5	95.7	0.48	0.26	5.38	0.36	14.1	13.5	1.50	31	0.00	10.64	13.92	0.17	1969
F+4	16.6	87.1	0.60	0.33	8.34	0.50	15.8	24.1	2.06	56	0.00	16.93	22.10	0.15	3404
F+4	17.0	62.8	0.60	0.33	8.56	0.51	15.8	17.8	2.11	58	0.00	12.53	14.95	0.15	3488
F+6	26.3	96.2	0.66	0.36	11.99	0.68	16.4	42.1	2.80	93	0.00	28.57	38.11	0.17	5097
F+6	23.3	92.0	0.66	0.36	10.66	0.61	16.4	35.8	2.51	79	0.00	24.27	32.38	0.15	4570

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 91.34 Kinematic Viscosity = 0.897 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 33.17 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 5.19 %														
R+2	11.1	25.5	0.17	0.12	15.69	1.06	13.3	4.7	5.36	151	1.36	2.59	2.76	3.08	2023
R+2	11.3	23.8	0.17	0.12	15.88	1.07	13.3	4.5	5.41	153	1.36	2.38	2.66	3.11	2042
R+4	18.3	20.7	0.24	0.16	18.86	1.23	14.4	6.3	6.23	204	1.22	3.65	4.15	1.91	3211
R+4	18.4	20.8	0.24	0.16	19.01	1.23	14.4	6.4	6.25	205	1.22	3.71	4.21	1.92	3224
R+6	27.1	19.7	0.27	0.19	23.90	1.44	15.2	8.9	7.30	273	1.12	5.38	5.97	1.64	4395
R+6	27.8	21.7	0.27	0.19	24.58	1.46	15.2	10.1	7.42	281	1.12	6.25	6.80	1.67	4472
R+8	35.4	26.8	0.37	0.25	23.43	1.39	15.6	15.9	7.04	267	1.07	10.20	10.41	0.89	5666
R+8	35.4	29.3	0.37	0.25	23.37	1.38	15.6	17.2	7.02	265	1.07	11.18	11.34	0.89	5646
R+10	39.5	29.0	0.43	0.30	22.29	1.30	16.6	19.1	6.58	256	0.98	11.86	11.79	0.60	6214
R+10	43.4	36.3	0.43	0.30	24.48	1.38	16.6	26.2	6.99	280	0.98	16.63	16.65	0.64	6598
F+2	6.3	28.7	0.28	0.19	5.52	0.59	8.1	3.0	2.98	38	0.00	4.14	4.31	0.65	1823
F+2	6.5	29.4	0.28	0.19	5.65	0.60	8.1	3.2	3.04	39	0.00	4.35	4.54	0.67	1861
F+4	14.2	33.2	0.33	0.23	10.40	0.87	10.0	7.9	4.42	85	0.00	8.75	9.19	0.68	3219
F+4	13.9	29.9	0.33	0.23	10.14	0.85	10.0	6.9	4.33	82	0.00	7.69	8.03	0.67	3151
F+6	23.5	18.2	0.39	0.27	14.64	1.07	11.3	7.1	5.44	130	0.00	7.05	7.25	0.61	4635
F+6	22.2	20.8	0.39	0.27	13.86	1.02	11.3	7.7	5.20	122	0.00	7.61	7.86	0.58	4430
F+8	31.2	20.5	0.43	0.30	17.60	1.17	12.4	10.7	5.94	164	0.00	9.60	9.93	0.54	5615
F+8	31.8	18.2	0.43	0.30	17.92	1.19	12.4	9.6	6.03	168	0.00	8.65	8.91	0.55	5700
F+10	36.7	19.7	0.47	0.32	18.85	1.18	13.3	12.0	6.02	179	0.00	10.10	10.45	0.46	6241
F+10	36.6	23.2	0.47	0.32	18.80	1.18	13.3	14.2	6.01	178	0.00	11.91	12.41	0.46	6228
Rill 2	slope = 5.03 %														
R+2	11.0	22.3	0.18	0.12	15.18	1.08	13.1	4.1	5.32	147	1.38	2.08	1.88	2.92	2118
R+2	11.8	25.6	0.18	0.12	16.24	1.14	13.1	5.0	5.59	158	1.38	2.87	2.65	3.07	2226
R+4	16.7	18.1	0.20	0.14	19.85	1.38	13.1	5.0	6.79	212	1.38	2.88	3.37	2.76	3144
R+4	19.0	19.9	0.20	0.14	22.61	1.52	13.1	6.3	7.46	244	1.38	3.97	4.47	3.03	3452
R+6	25.2	16.8	0.30	0.21	20.29	1.29	14.4	7.0	6.33	209	1.22	4.23	4.22	1.18	4315
R+6	26.9	18.2	0.30	0.21	21.69	1.36	14.4	8.1	6.67	226	1.22	5.08	5.08	1.25	4550
R+8	35.0	18.0	0.31	0.21	27.20	1.61	15.3	10.5	7.93	312	1.11	6.49	6.73	1.39	5594
R+8	33.6	19.3	0.31	0.21	26.18	1.56	15.3	10.8	7.68	298	1.11	6.73	6.88	1.34	5421
R+10	38.2	20.4	0.34	0.23	27.11	1.58	16.6	13.0	7.75	327	0.98	7.71	7.79	1.13	5999
R+10	38.9	26.2	0.34	0.23	27.63	1.60	16.6	17.0	7.85	333	0.98	10.44	10.32	1.14	6076

RILL DATA ANALYSIS SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 5.03 %														
F+2	6.3	8.9	0.23	0.16	6.60	0.65	8.8	0.9	3.20	46	0.00	1.19	1.21	1.00	1688
F+2	6.4	11.4	0.23	0.16	6.69	0.66	8.8	1.2	3.23	46	0.00	1.55	1.57	1.01	1707
F+4	14.8	20.2	0.31	0.21	11.67	0.98	9.7	5.0	4.81	93	0.00	5.72	5.88	0.86	3350
F+4	15.0	21.3	0.31	0.21	11.79	0.98	9.7	5.3	4.85	94	0.00	6.10	6.27	0.87	3379
F+6	22.2	35.6	0.35	0.24	15.26	1.09	11.6	13.1	5.35	131	0.00	12.63	13.31	0.73	4272
F+6	20.9	35.9	0.35	0.24	14.40	1.04	11.6	12.5	5.10	122	0.00	12.04	12.70	0.70	4072
F+8	29.5	28.0	0.37	0.25	19.39	1.29	12.0	13.8	6.35	175	0.00	12.77	13.30	0.79	5311
F+8	29.0	39.4	0.37	0.25	19.03	1.27	12.0	19.0	6.25	171	0.00	17.64	18.70	0.78	5231
F+10	32.6	29.9	0.40	0.27	19.86	1.23	13.3	16.2	6.07	182	0.00	13.55	14.19	0.65	5464
F+10	30.9	34.2	0.40	0.27	18.87	1.18	13.3	17.6	5.82	171	0.00	14.70	15.52	0.63	5238
Rill 3	slope = 3.97 %														
R+4	17.2	8.3	0.22	0.15	18.73	1.27	12.8	2.4	4.92	128	1.43	0.63	0.00	1.67	3150
R+6	23.6	11.0	0.26	0.18	21.69	1.40	13.0	4.3	5.44	151	1.40	2.29	2.56	1.33	4113
R+6	26.0	12.2	0.26	0.18	23.93	1.49	13.0	5.3	5.79	166	1.40	3.13	3.63	1.42	4377
R+8	32.0	13.4	0.29	0.20	26.69	1.57	13.8	7.2	6.11	189	1.30	4.50	5.00	1.22	5095
R+8	32.1	19.2	0.29	0.20	26.76	1.58	13.8	10.3	6.12	190	1.30	7.02	7.24	1.23	5112
R+10	40.7	16.6	0.35	0.24	28.35	1.56	15.4	11.2	6.05	210	1.09	6.98	7.13	0.85	6030
R+10	36.9	26.9	0.35	0.24	25.72	1.54	15.4	16.5	5.97	206	1.09	10.82	10.54	0.84	5952
F+2	6.0	28.9	0.27	0.19	5.31	0.52	9.1	2.9	2.03	24	0.00	3.53	3.76	0.46	1594
F+2	6.1	21.7	0.27	0.19	5.44	0.53	9.1	2.2	2.08	25	0.00	2.72	2.85	0.47	1630
F+4	13.9	21.4	0.35	0.24	9.59	0.81	10.1	5.0	3.13	51	0.00	5.45	5.74	0.43	3162
F+4	13.7	21.9	0.35	0.24	9.47	0.80	10.1	5.0	3.10	50	0.00	5.51	5.80	0.42	3127
F+6	21.1	16.2	0.38	0.26	13.56	1.01	11.1	5.7	3.94	79	0.00	5.71	5.93	0.47	4271
F+6	20.6	20.1	0.38	0.26	13.21	0.99	11.1	6.9	3.86	77	0.00	6.92	7.25	0.46	4181
F+8	29.3	22.2	0.42	0.29	16.93	1.14	12.2	10.9	4.45	104	0.00	9.90	10.46	0.43	5363
F+8	29.2	19.5	0.42	0.29	16.83	1.14	12.2	9.5	4.43	104	0.00	8.62	9.04	0.43	5335
F+10	33.9	26.0	0.43	0.29	19.21	1.19	13.4	14.7	4.63	122	0.00	12.17	12.96	0.43	5689
F+10	34.4	29.2	0.43	0.29	19.48	1.21	13.4	16.7	4.69	125	0.00	13.83	14.85	0.43	5756

RILL DATA ANALYSIS SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 4	slope = 3.72 %														
R+6	26.8	6.1	0.26	0.18	24.65	1.48	15.6	2.7	5.37	178	1.07	0.87	1.47	1.31	4333
R+6	27.8	6.2	0.26	0.18	25.64	1.51	15.6	2.9	5.49	184	1.07	0.97	1.55	1.34	4436
R+8	34.4	7.4	0.30	0.21	27.40	1.41	17.2	4.2	5.11	182	0.93	1.80	2.11	0.94	4771
R+8	34.4	9.6	0.30	0.21	27.41	1.41	17.2	5.5	5.11	182	0.93	2.65	2.78	0.94	4771
R+10	37.3	16.4	0.39	0.27	22.99	1.22	17.2	10.2	4.44	147	0.93	5.69	5.04	0.49	5358
R+10	39.8	18.1	0.39	0.27	24.50	1.28	17.2	12.0	4.66	158	0.93	6.83	6.00	0.51	5622
F+2	6.5	14.5	0.24	0.17	6.55	0.65	8.8	1.6	2.35	29	0.00	2.00	2.06	0.68	1738
F+2	6.5	15.3	0.24	0.17	6.53	0.64	8.8	1.7	2.34	29	0.00	2.10	2.17	0.68	1732
F+4	14.7	16.2	0.30	0.21	11.92	0.99	9.8	4.0	3.60	61	0.00	4.51	4.66	0.69	3294
F+4	14.4	19.1	0.30	0.21	11.69	0.97	9.8	4.6	3.54	59	0.00	5.23	5.44	0.68	3243
F+6	20.7	22.6	0.34	0.23	14.72	1.07	11.3	7.8	3.89	79	0.00	7.65	8.05	0.57	4061
F+6	22.5	24.3	0.34	0.23	16.05	1.15	11.3	9.1	4.18	88	0.00	8.96	9.46	0.61	4356
F+8	32.2	22.7	0.41	0.28	19.22	1.23	12.8	12.2	4.47	111	0.00	10.57	11.19	0.46	5569
F+8	31.4	24.1	0.41	0.28	18.74	1.20	12.8	12.6	4.38	107	0.00	10.94	11.64	0.45	5454
F+10	36.9	25.4	0.41	0.28	21.67	1.32	13.3	15.6	4.82	129	0.00	13.06	13.93	0.48	6102
F+10	37.4	28.0	0.41	0.28	21.96	1.34	13.3	17.4	4.87	131	0.00	14.56	15.62	0.48	6168
Rill 5	slope = 4.17 %														
R+4	17.7	8.2	0.24	0.16	17.95	1.15	14.4	2.4	4.70	134	1.22	0.66	0.73	1.39	3076
R+4	18.0	15.6	0.24	0.16	18.19	1.16	14.4	4.7	4.74	135	1.22	2.40	1.61	1.40	3102
R+6	28.8	10.8	0.29	0.20	24.32	1.43	15.6	5.2	5.84	202	1.07	2.60	3.17	1.20	4579
R+6	24.3	12.9	0.29	0.20	20.49	1.26	15.6	5.2	5.15	167	1.07	2.64	2.74	1.06	4035
R+8	32.2	14.1	0.32	0.22	24.50	1.38	16.6	7.6	5.62	201	0.98	4.10	4.34	0.94	4895
R+8	30.7	11.8	0.32	0.22	23.36	1.33	16.6	6.0	5.41	190	0.98	3.08	3.32	0.90	4717
R+10	35.8	21.1	0.34	0.23	25.76	1.43	16.9	12.6	5.82	217	0.95	7.35	7.37	0.87	5358
R+10	35.9	25.8	0.34	0.23	25.85	1.44	16.9	15.5	5.86	219	0.95	9.22	9.12	0.88	5396
F+2	6.7	26.5	0.24	0.17	6.67	0.67	8.4	2.9	2.75	35	0.00	3.88	4.05	0.79	1819
F+2	6.8	25.1	0.24	0.17	6.79	0.68	8.4	2.8	2.79	36	0.00	3.74	3.89	0.80	1846
F+4	14.7	26.4	0.31	0.21	11.67	0.93	10.4	6.5	3.80	71	0.00	6.88	7.22	0.69	3168
F+4	17.4	22.4	0.31	0.21	13.81	1.07	10.4	6.5	4.36	87	0.00	6.92	7.19	0.80	3637
F+6	19.4	21.1	0.34	0.23	14.00	1.04	11.1	6.8	4.24	89	0.00	6.79	7.07	0.64	3879
F+6	19.5	21.7	0.34	0.23	14.10	1.04	11.1	7.1	4.26	90	0.00	7.05	7.35	0.64	3903
F+8	26.1	18.6	0.34	0.23	18.56	1.22	12.4	8.1	4.99	126	0.00	7.25	7.49	0.73	4644
F+8	26.4	21.4	0.34	0.23	18.76	1.23	12.4	9.4	5.03	128	0.00	8.43	8.76	0.73	4684
F+10	32.2	18.0	0.37	0.25	21.26	1.31	13.1	9.6	5.37	149	0.00	8.16	8.44	0.67	5390
F+10	32.8	16.5	0.37	0.25	21.60	1.33	13.1	9.0	5.44	152	0.00	7.61	7.84	0.68	5461

RILL DATA ANALYSIS SOIL: CECIL (ERODED) DATE: JUNE 9, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 6	slope = 3.81 %														
R+4	18.5	8.8	0.27	0.19	16.47	1.19	12.5	2.7	4.44	107	1.48	0.93	1.21	1.02	3615
R+6	26.9	11.2	0.32	0.22	20.58	1.34	13.8	5.0	5.00	140	1.30	2.77	2.74	0.85	4732
R+6	26.5	10.0	0.32	0.22	20.31	1.33	13.8	4.4	4.96	139	1.30	2.26	2.37	0.84	4697
R+8	35.1	10.7	0.28	0.19	30.77	1.70	15.1	6.2	6.32	220	1.13	3.45	3.81	1.40	5227
R+8	33.2	13.9	0.28	0.19	29.09	1.63	15.1	7.7	6.06	206	1.13	4.50	4.61	1.35	5011
R+10	40.6	13.3	0.34	0.24	28.61	1.61	16.3	9.0	5.98	217	1.01	5.13	5.11	0.86	6166
R+10	41.3	14.8	0.34	0.24	29.08	1.63	16.3	10.2	6.06	221	1.01	5.97	5.85	0.87	6243
F+2	7.0	9.0	0.21	0.15	7.98	0.73	9.3	1.0	2.74	38	0.00	1.26	1.28	1.03	1736
F+2	7.2	15.5	0.21	0.15	8.28	0.76	9.3	1.9	2.82	40	0.00	2.25	2.30	1.07	1791
F+4	14.9	15.8	0.27	0.19	13.23	1.05	10.2	3.9	3.90	72	0.00	4.28	4.40	0.89	3184
F+4	14.8	18.9	0.27	0.19	13.15	1.04	10.2	4.7	3.89	71	0.00	5.09	5.26	0.89	3169
F+6	22.3	19.2	0.32	0.22	17.08	1.19	11.6	7.1	4.44	99	0.00	6.86	7.13	0.75	4212
F+6	22.7	19.7	0.32	0.22	17.39	1.21	11.6	7.5	4.51	101	0.00	7.16	7.44	0.76	4273
F+8	23.7	15.4	0.35	0.24	16.22	1.09	12.5	6.1	4.05	93	0.00	5.41	5.60	0.55	4285
F+8	23.7	19.1	0.35	0.24	16.22	1.09	12.5	7.5	4.05	93	0.00	6.69	6.97	0.55	4286
F+10	29.3	19.2	0.35	0.24	20.20	1.25	13.3	9.4	4.67	122	0.00	7.84	8.16	0.64	4916
F+10	29.8	20.4	0.35	0.24	20.56	1.27	13.3	10.1	4.74	125	0.00	8.50	8.86	0.65	4986

RILL DATA ANALYSIS SOIL: HIWASSEE DATE: JUNE 10, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 98.01 Kinematic Viscosity = 0.941 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 34.49 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 4.05 %														
R+2	10.5	36.1	0.33	0.18	9.73	0.80	6.3	6.3	3.17	35	3.66	7.54	7.54	0.79	2766
R+2	11.5	29.1	0.33	0.18	10.73	0.86	6.3	5.6	3.41	38	3.66	6.31	6.32	0.85	2974
R+4	18.8	20.2	0.44	0.24	13.04	0.96	6.3	6.3	3.80	45	3.66	7.59	8.30	0.53	4445
R+4	17.9	20.5	0.44	0.24	12.43	0.94	6.3	6.1	3.72	44	3.66	7.23	7.86	0.52	4353
R+6	21.4	28.5	0.41	0.23	15.68	1.08	9.4	10.2	4.28	81	2.25	9.83	10.78	0.66	4739
R+6	21.3	33.7	0.41	0.23	15.58	1.07	9.4	12.0	4.24	80	2.25	11.92	12.74	0.66	4695
R+8	25.3	30.1	0.46	0.25	16.81	1.09	11.3	12.7	4.32	99	1.78	10.78	11.66	0.55	5281
R+8	28.1	35.0	0.46	0.25	18.63	1.16	11.3	16.4	4.59	109	1.78	14.42	15.51	0.58	5620
R+10	31.6	36.3	0.47	0.26	20.20	1.24	12.5	19.1	4.91	133	1.54	15.43	16.68	0.58	6226
R+10	34.0	39.2	0.47	0.26	21.74	1.31	12.5	22.2	5.19	145	1.54	18.18	19.68	0.61	6577
F+2	5.0	37.9	0.30	0.17	4.97	0.57	7.5	3.1	2.25	25	0.00	4.66	4.98	0.65	1831
F+2	5.0	46.8	0.30	0.17	4.99	0.57	7.5	3.9	2.26	25	0.00	5.77	6.28	0.65	1836
F+4	12.9	43.7	0.40	0.22	9.78	0.76	11.3	9.4	3.01	58	0.00	9.27	10.12	0.50	3214
F+4	13.3	42.5	0.40	0.22	10.09	0.78	11.3	9.4	3.09	60	0.00	9.28	10.10	0.51	3302
F+6	18.1	45.9	0.43	0.24	12.63	0.88	12.5	13.8	3.47	79	0.00	12.30	13.51	0.49	4036
F+6	18.0	47.4	0.43	0.24	12.59	0.87	12.5	14.2	3.46	79	0.00	12.64	13.94	0.49	4025
F+8	23.4	53.4	0.45	0.25	15.79	1.06	12.5	20.8	4.20	106	0.00	18.48	20.58	0.55	5048
F+8	25.0	46.4	0.45	0.25	16.90	1.12	12.5	19.3	4.45	115	0.00	17.20	18.83	0.59	5343
F+10	30.2	51.9	0.48	0.26	19.20	1.25	12.5	26.1	4.94	135	0.00	23.23	25.83	0.58	6315
F+10	29.6	40.6	0.48	0.26	18.79	1.23	12.5	20.0	4.86	131	0.00	17.78	19.29	0.57	6206
Rill 2	slope = 3.94 %														
R+2	10.5	30.4	0.33	0.18	9.68	0.82	6.3	5.3	3.16	34	3.66	5.77	6.07	0.78	2845
R+2	10.3	19.9	0.33	0.18	9.57	0.82	6.3	3.4	3.16	34	3.66	2.44	3.85	0.78	2845
R+4	18.0	22.0	0.42	0.23	12.96	0.93	6.3	6.6	3.58	42	3.66	8.05	9.69	0.54	4153
R+4	18.1	31.0	0.42	0.23	13.06	0.93	6.3	9.4	3.58	42	3.66	12.99	14.19	0.54	4153
R+6	21.4	27.8	0.41	0.23	15.75	1.08	7.5	9.9	4.16	62	2.95	11.71	13.92	0.65	4717
R+6	19.6	35.7	0.41	0.23	14.46	1.01	7.5	11.7	3.89	56	2.95	14.34	16.30	0.61	4411
R+8	22.7	39.9	0.41	0.23	16.73	1.11	11.3	15.1	4.28	98	1.78	13.17	15.02	0.67	4848
R+8	24.2	65.0	0.41	0.23	17.83	1.16	11.3	26.2	4.47	104	1.78	24.14	27.74	0.70	5066
R+10	30.0	59.9	0.53	0.29	17.03	1.02	12.5	29.9	3.93	95	1.54	25.07	28.97	0.37	5771
R+10	33.9	61.9	0.53	0.29	19.24	1.12	12.5	34.9	4.32	110	1.54	29.51	34.71	0.40	6337

RILL DATA ANALYSIS SOIL: HIWASSEE DATE: JUNE 10, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 3.94 %														
F+2	6.2	85.4	0.30	0.17	6.19	0.72	6.9	8.8	2.78	31	0.00	14.29	16.79	0.80	2330
F+2	6.1	65.4	0.30	0.17	6.08	0.71	6.9	6.7	2.74	31	0.00	10.75	12.12	0.79	2297
F+4	14.2	61.7	0.39	0.21	11.10	0.96	9.4	14.6	3.69	65	0.00	17.26	19.54	0.65	3926
F+4	14.3	53.5	0.39	0.21	11.17	0.96	9.4	12.7	3.70	65	0.00	15.07	16.76	0.66	3944
F+6	18.4	60.4	0.46	0.25	12.08	0.84	12.5	18.5	3.25	72	0.00	16.44	19.01	0.41	4124
F+6	19.0	63.4	0.46	0.25	12.53	0.87	12.5	20.1	3.36	75	0.00	17.89	20.81	0.42	4257
F+8	19.6	35.5	0.44	0.25	13.36	0.92	12.5	11.6	3.55	82	0.00	10.34	11.15	0.47	4353
F+8	25.3	33.6	0.44	0.25	17.17	1.14	12.5	14.1	4.39	113	0.00	12.57	13.43	0.59	5383
F+10	32.9	38.8	0.50	0.28	19.93	1.29	12.5	21.3	4.96	135	0.00	18.92	20.58	0.52	6828
F+10	30.6	30.0	0.50	0.28	18.52	1.21	12.5	15.3	4.67	124	0.00	13.61	14.53	0.49	6432
Rill 3	slope = 3.55 %														
R+2	12.2	19.9	0.37	0.20	10.12	0.84	6.9	4.1	2.92	34	3.27	3.27	4.90	0.58	3264
R+2	11.6	27.1	0.37	0.20	9.62	0.81	6.9	5.2	2.82	32	3.27	5.21	6.18	0.56	3147
R+4	18.7	25.7	0.41	0.22	13.87	0.99	6.9	8.0	3.44	43	3.27	9.68	11.32	0.55	4294
R+4	18.1	42.4	0.41	0.22	13.39	0.97	6.9	12.8	3.37	42	3.27	17.37	18.89	0.53	4207
R+6	24.2	28.4	0.43	0.23	17.17	1.12	10.0	11.4	3.90	75	2.07	10.63	12.27	0.57	5065
R+6	25.1	51.9	0.43	0.23	17.84	1.16	10.0	21.7	4.03	79	2.07	22.05	25.09	0.59	5246
R+8	30.2	37.4	0.45	0.25	20.24	1.20	11.3	18.9	4.17	94	1.78	16.85	19.00	0.54	5766
R+8	31.9	57.0	0.45	0.25	21.36	1.25	11.3	30.3	4.35	100	1.78	28.19	32.68	0.56	6006
R+10	32.5	36.5	0.49	0.27	20.16	1.20	12.5	19.7	4.17	104	1.54	16.01	18.00	0.46	6216
R+10	38.3	38.9	0.49	0.27	23.74	1.36	12.5	24.8	4.73	126	1.54	20.53	23.10	0.53	7044
F+2	6.4	49.8	0.31	0.17	6.13	0.58	9.4	5.3	2.01	26	0.00	6.25	6.98	0.54	1927
F+2	6.4	41.6	0.31	0.17	6.18	0.58	9.4	4.5	2.03	27	0.00	5.27	5.77	0.54	1943
F+4	16.7	43.5	0.40	0.22	12.64	0.95	11.3	12.1	3.29	66	0.00	11.94	13.19	0.55	4012
F+4	13.3	39.3	0.40	0.22	10.10	0.78	11.3	8.7	2.72	49	0.00	8.62	9.48	0.45	3311
F+6	21.2	37.9	0.43	0.24	14.84	1.01	12.5	13.4	3.50	80	0.00	11.89	13.01	0.50	4625
F+6	20.7	33.8	0.43	0.24	14.49	0.99	12.5	11.7	3.43	78	0.00	10.36	11.22	0.49	4532
F+8	28.2	35.5	0.48	0.26	17.99	1.18	12.5	16.7	4.11	102	0.00	14.86	16.23	0.48	5972
F+10	29.2	36.5	0.48	0.26	18.58	1.21	12.5	17.8	4.23	106	0.00	15.78	17.26	0.49	6132

RILL DATA ANALYSIS SOIL: HIWASSEE DATE: JUNE 10, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 4.41 %														
F+8	27.7	53.0	0.55	0.30	15.25	1.03	12.5	24.5	4.45	115	0.00	21.78	24.50	0.39	6025
F+8	33.7	47.6	0.57	0.32	17.76	1.17	12.5	26.7	5.06	139	0.00	23.77	26.39	0.41	7145
F+10	33.9	51.0	0.57	0.32	17.86	1.18	12.5	28.8	5.08	140	0.00	25.59	28.65	0.41	7176
Rill 6	slope = 4.08 %														
R+0	3.4	50.7	0.19	0.10	5.45	0.60	6.3	2.9	2.40	23	3.66	1.48	2.85	1.76	1208
R+2	10.0	56.2	0.34	0.19	8.79	0.77	6.3	9.4	3.08	33	3.66	13.03	13.70	0.68	2820
R+2	10.9	55.4	0.34	0.19	9.60	0.83	6.3	10.1	3.32	37	3.66	14.32	15.48	0.74	3040
R+4	16.4	64.5	0.38	0.21	12.89	0.93	9.4	17.6	3.72	66	2.25	18.65	20.79	0.66	3804
R+4	18.4	48.2	0.38	0.21	14.43	1.02	9.4	14.7	4.08	76	2.25	15.23	17.13	0.73	4172
R+6	24.6	52.3	0.43	0.24	17.29	1.16	11.3	21.4	4.63	110	1.78	19.40	21.70	0.66	5298
R+6	24.4	64.4	0.43	0.24	17.16	1.15	11.3	26.2	4.59	109	1.78	24.06	27.14	0.66	5253
R+8	31.4	56.0	0.43	0.24	22.18	1.21	12.5	29.3	4.83	130	1.54	24.48	27.54	0.70	5499
R+8	30.9	55.5	0.43	0.24	21.85	1.19	12.5	28.6	4.75	127	1.54	23.86	26.84	0.69	5408
R+10	37.9	46.2	0.41	0.23	27.62	1.45	12.5	29.2	5.79	171	1.54	24.39	27.06	0.89	6394
R+10	39.1	54.1	0.41	0.23	28.53	1.49	12.5	35.3	5.95	178	1.54	29.83	33.30	0.91	6570
F+2	5.7	37.0	0.28	0.15	6.31	0.59	9.4	3.5	2.37	34	0.00	4.20	4.44	0.82	1737
F+2	6.2	43.5	0.28	0.15	6.76	0.63	9.4	4.5	2.52	37	0.00	5.30	5.65	0.88	1847
F+4	13.8	56.1	0.37	0.20	11.39	0.87	11.3	12.9	3.46	71	0.00	12.79	14.12	0.68	3386
F+4	12.1	46.7	0.37	0.20	9.96	0.77	11.3	9.4	3.08	60	0.00	9.31	10.13	0.60	3016
F+6	19.3	44.6	0.43	0.23	13.69	0.94	12.5	14.4	3.76	89	0.00	12.76	13.91	0.55	4263
F+6	21.3	61.1	0.43	0.23	15.08	1.02	12.5	21.6	4.08	101	0.00	19.24	21.66	0.59	4629
F+8	28.3	61.0	0.46	0.25	18.75	1.19	13.1	28.8	4.74	133	0.00	24.38	27.48	0.60	5761
F+8	30.3	52.8	0.46	0.25	20.09	1.26	13.1	26.7	5.02	145	0.00	22.61	25.00	0.63	6097
F+10	36.2	43.1	0.50	0.28	21.70	1.34	13.1	26.0	5.34	159	0.00	21.98	24.00	0.55	7162
F+10	35.1	51.8	0.50	0.28	21.07	1.31	13.1	30.3	5.21	153	0.00	25.69	28.62	0.54	6993

RILL DATA ANALYSIS SOIL: GASTON DATE: JUNE 13, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 85.35 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 32.44 g/mn/m^2

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E	D_r	D_c	F	Re
											<- - -	g/s/m^2	- - ->		
Rill 1	slope = 6.65 %														
R+2	10.6	32.8	0.20	0.14	12.72	1.08	12.6	5.8	7.03	201	1.43	3.65	3.43	2.94	2481
R+2	12.0	38.0	0.20	0.14	14.48	1.19	12.6	7.6	7.75	232	1.43	5.28	5.62	3.24	2733
R+4	19.4	57.0	0.26	0.18	18.42	1.38	13.5	18.5	8.98	310	1.30	13.90	14.26	2.33	4023
R+4	28.7	49.2	0.26	0.18	27.15	1.67	13.5	23.5	10.87	413	1.30	18.02	18.83	2.82	4869
R+6	26.4	62.5	0.27	0.18	23.84	1.60	13.8	27.5	10.42	395	1.27	20.97	21.72	2.45	4897
R+6	27.7	58.8	0.27	0.18	25.04	1.63	13.8	27.2	10.61	406	1.27	20.71	21.49	2.50	4988
R+8	34.5	55.0	0.30	0.20	28.14	1.64	13.5	31.6	10.68	402	1.30	24.72	25.59	2.05	5559
R+8	34.9	51.4	0.30	0.20	28.47	1.66	13.5	29.9	10.81	409	1.30	23.30	24.16	2.07	5627
R+10	47.3	51.2	0.30	0.21	38.13	2.01	14.0	40.3	13.09	566	1.24	30.75	32.04	2.46	6885
R+10	42.9	66.5	0.30	0.21	34.57	1.89	14.0	47.5	12.31	516	1.24	36.49	38.03	2.31	6474
F+2	7.2	44.4	0.21	0.14	8.49	0.70	10.6	5.3	4.56	88	0.00	5.56	5.74	1.84	1639
F+2	7.2	47.4	0.21	0.14	8.54	0.70	10.6	5.7	4.59	89	0.00	5.98	6.19	1.85	1648
F+4	15.5	56.8	0.26	0.18	14.70	1.07	11.3	14.7	6.98	177	0.00	14.52	15.16	1.81	3130
F+4	15.9	50.9	0.26	0.18	15.07	1.09	11.3	13.5	7.13	183	0.00	13.33	13.85	1.85	3194
F+6	23.7	44.2	0.27	0.18	21.51	1.30	13.5	17.4	8.49	285	0.00	14.35	14.81	2.02	3969
F+6	24.3	44.6	0.27	0.18	22.04	1.33	13.5	18.0	8.66	294	0.00	14.84	15.32	2.06	4049
F+8	32.0	36.7	0.31	0.21	25.12	1.36	15.4	19.6	8.87	347	0.00	14.14	14.55	1.58	4795
F+8	33.7	41.7	0.31	0.21	26.47	1.42	15.4	23.5	9.26	370	0.00	16.95	17.51	1.65	5007
F+10	39.9	41.3	0.30	0.20	32.69	1.69	15.4	27.5	10.99	478	0.00	19.86	20.45	2.13	5694
F+10	39.5	38.9	0.30	0.20	32.32	1.67	15.4	25.6	10.89	471	0.00	18.49	19.01	2.11	5643
Rill 2	slope = 6.51 %														
R+0	3.8	36.7	0.13	0.09	7.31	0.87	10.9	2.3	5.54	121	1.75	0.64	0.00	5.89	1252
R+2	10.8	33.2	0.19	0.13	13.49	1.22	11.9	6.0	7.77	219	1.55	4.04	4.88	3.49	2702
R+2	9.9	29.8	0.19	0.13	12.39	1.15	11.9	4.9	7.32	201	1.55	3.07	3.85	3.29	2547
R+4	17.2	27.5	0.22	0.15	18.81	1.42	11.4	7.9	9.04	264	1.65	6.07	7.12	3.11	3594
R+4	25.9	29.5	0.22	0.15	28.25	1.87	11.4	12.7	11.91	399	1.65	10.79	12.02	4.10	4733
R+6	21.9	44.7	0.27	0.19	19.44	1.39	12.3	16.3	8.85	275	1.49	13.31	13.90	2.01	4331
R+6	24.1	48.1	0.27	0.19	21.35	1.49	12.3	19.3	9.49	306	1.49	16.03	16.76	2.15	4643
R+8	29.5	74.0	0.31	0.21	23.42	1.49	12.1	36.4	9.49	302	1.51	31.84	32.79	1.72	5190
R+8	33.3	67.9	0.31	0.21	26.45	1.63	12.1	37.7	10.38	346	1.51	33.07	34.34	1.89	5677
R+10	38.0	65.7	0.32	0.22	29.14	1.75	12.9	41.6	11.14	409	1.39	34.49	35.98	1.89	6301
R+10	39.1	68.1	0.32	0.22	29.99	1.79	12.9	44.3	11.40	423	1.39	36.87	38.51	1.94	6445

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 6.51 %														
F+2	5.3	69.6	0.23	0.16	5.65	0.54	9.3	6.2	3.46	51	0.00	7.46	7.95	1.12	1422
F+2	5.6	68.4	0.23	0.16	5.95	0.57	9.3	6.4	3.63	55	0.00	7.71	8.20	1.17	1489
F+4	14.0	67.8	0.28	0.19	12.22	0.99	10.1	15.9	6.28	136	0.00	17.42	18.52	1.37	3132
F+4	14.6	60.7	0.28	0.19	12.66	1.01	10.1	14.7	6.46	142	0.00	16.15	17.05	1.41	3223
F+6	19.9	51.4	0.28	0.19	17.24	1.15	12.4	17.0	7.32	209	0.00	15.28	15.94	1.59	3664
F+6	19.4	50.4	0.28	0.19	16.86	1.13	12.4	16.3	7.19	204	0.00	14.68	15.30	1.56	3597
F+8	25.4	47.4	0.30	0.20	20.83	1.28	13.4	20.0	8.14	265	0.00	16.65	17.31	1.58	4302
F+8	28.0	44.2	0.30	0.20	22.97	1.38	13.4	20.6	8.81	298	0.00	17.13	17.75	1.71	4657
F+10	34.2	39.4	0.29	0.20	28.72	1.67	13.0	22.5	10.65	386	0.00	19.21	19.79	2.16	5510
F+10	35.0	30.3	0.29	0.20	29.39	1.70	13.0	17.7	10.84	396	0.00	15.14	15.49	2.20	5606
Rill 3	slope = 6.03 %														
R+0	3.8	42.8	0.14	0.10	6.31	0.79	9.0	2.7	4.66	77	2.22	1.09	0.00	3.80	1300
R+2	10.5	36.1	0.23	0.16	11.19	0.98	10.6	6.3	5.79	126	1.80	4.77	5.36	1.91	2529
R+2	11.2	42.2	0.23	0.16	11.99	1.03	10.6	7.9	6.08	136	1.80	6.43	7.08	2.01	2658
R+4	19.5	62.7	0.31	0.21	15.43	1.24	12.0	20.3	7.32	203	1.53	17.31	18.28	1.33	4321
R+4	28.5	60.2	0.31	0.21	22.59	1.60	12.0	28.6	9.45	297	1.53	24.93	26.58	1.71	5576
R+6	26.1	60.4	0.33	0.23	19.06	1.43	13.0	26.3	8.44	272	1.37	21.10	22.44	1.30	5411
R+6	25.8	72.0	0.33	0.23	18.87	1.42	13.0	31.0	8.38	269	1.37	25.14	26.70	1.29	5373
R+8	31.6	61.8	0.36	0.25	21.35	1.39	12.8	32.6	8.21	256	1.41	26.96	28.64	1.08	5681
R+8	33.1	68.9	0.36	0.25	22.35	1.43	12.8	38.0	8.44	267	1.41	31.66	33.77	1.11	5845
R+10	36.8	63.3	0.39	0.26	23.14	1.47	13.1	38.8	8.68	286	1.35	31.48	33.59	0.99	6456
R+10	42.2	60.1	0.39	0.26	26.53	1.62	13.1	42.3	9.56	331	1.35	34.42	36.76	1.09	7115
F+2	7.1	77.2	0.25	0.17	6.95	0.60	10.3	9.1	3.56	59	0.00	9.86	10.71	1.00	1694
F+2	7.2	73.7	0.25	0.17	7.11	0.62	10.3	8.9	3.64	61	0.00	9.62	10.40	1.02	1729
F+4	13.9	67.1	0.28	0.19	12.23	0.88	12.0	15.6	5.19	121	0.00	14.42	15.44	1.15	2767
F+4	14.9	57.0	0.28	0.19	13.09	0.93	12.0	14.2	5.50	132	0.00	13.12	13.88	1.22	2934
F+6	22.2	43.2	0.31	0.21	17.29	1.12	13.0	16.0	6.59	188	0.00	13.64	14.26	1.16	3952
F+6	21.3	42.5	0.31	0.21	16.63	1.08	13.0	15.1	6.38	179	0.00	12.92	13.50	1.12	3824
F+8	30.3	41.8	0.31	0.21	23.63	1.32	14.9	21.1	7.81	277	0.00	15.76	16.39	1.37	4683
F+8	32.5	36.0	0.31	0.21	25.41	1.41	14.9	19.5	8.30	303	0.00	14.60	15.09	1.46	4973
F+10	37.6	51.0	0.32	0.22	28.51	1.40	17.3	32.0	8.27	350	0.00	20.63	21.63	1.37	5112
F+10	35.5	53.6	0.32	0.22	26.87	1.33	17.3	31.7	7.86	325	0.00	20.42	21.49	1.30	4860

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 4	slope = 6.51 %														
R+0	3.2	43.9	0.15	0.11	5.11	0.63	8.0	2.4	4.01	55	2.57	0.73	0.00	2.87	1106
R+2	11.0	26.1	0.24	0.16	11.38	1.04	10.3	4.8	6.62	149	1.89	3.32	4.40	2.03	2788
R+2	11.0	26.3	0.24	0.16	11.36	1.04	10.3	4.8	6.62	149	1.89	3.34	4.42	2.03	2788
R+4	18.8	27.5	0.28	0.19	16.47	1.24	11.6	8.6	7.90	220	1.60	6.62	7.53	1.75	3912
R+4	28.0	30.4	0.28	0.19	24.56	1.67	11.6	14.2	10.63	344	1.60	11.96	12.99	2.35	5269
R+6	26.9	38.2	0.30	0.21	21.60	1.52	12.4	17.1	9.68	318	1.47	13.87	14.72	1.81	5225
R+6	27.1	40.7	0.30	0.21	21.81	1.53	12.4	18.4	9.74	321	1.47	15.04	15.87	1.82	5259
R+8	34.8	64.5	0.35	0.24	23.82	1.38	12.9	37.4	8.79	286	1.39	30.92	31.94	1.19	5577
R+8	32.0	74.4	0.35	0.24	21.90	1.39	12.9	39.7	8.85	289	1.39	32.87	34.01	1.19	5617
R+10	36.8	59.4	0.36	0.25	24.55	1.46	13.6	36.4	9.30	330	1.28	28.43	29.44	1.19	6050
F+2	7.4	41.9	0.26	0.18	6.80	0.59	10.3	5.1	3.77	64	0.00	5.58	5.82	0.93	1775
F+2	7.7	41.2	0.26	0.18	7.07	0.61	10.3	5.3	3.90	67	0.00	5.71	5.94	0.96	1835
F+4	15.4	43.1	0.30	0.20	12.55	0.92	11.6	11.1	5.85	141	0.00	10.57	11.01	1.12	3118
F+4	15.8	44.1	0.30	0.20	12.89	0.94	11.6	11.6	5.99	145	0.00	11.12	11.59	1.15	3189
F+6	24.7	53.9	0.30	0.21	20.06	1.26	13.0	22.2	8.03	253	0.00	18.94	19.83	1.53	4291
F+6	23.5	51.1	0.30	0.21	19.07	1.21	13.0	20.0	7.71	237	0.00	17.11	17.87	1.47	4118
F+8	30.2	39.5	0.32	0.22	22.88	1.32	14.4	19.9	8.39	298	0.00	15.38	15.92	1.39	4813
F+8	33.1	33.9	0.32	0.22	25.05	1.42	14.4	18.7	9.04	333	0.00	14.45	14.88	1.49	5183
F+10	39.7	43.9	0.36	0.25	26.84	1.45	15.3	29.0	9.21	364	0.00	21.12	22.01	1.22	5905
F+10	39.2	45.0	0.36	0.25	26.54	1.43	15.3	29.4	9.13	359	0.00	21.44	22.37	1.21	5851
Rill 5	slope = 6.51 %														
R+2	10.4	29.1	0.19	0.13	13.12	1.20	11.0	5.0	7.64	198	1.72	3.38	4.52	3.50	2634
R+2	11.2	27.3	0.19	0.13	14.13	1.27	11.0	5.1	8.09	216	1.72	3.44	4.65	3.70	2788
R+4	19.9	42.8	0.27	0.19	17.71	1.15	11.3	14.1	7.32	190	1.67	12.30	12.51	1.68	3561
R+4	27.6	41.9	0.27	0.19	24.64	1.25	11.3	19.3	7.96	216	1.67	17.38	17.68	1.83	3870
R+6	27.2	37.5	0.30	0.21	22.06	1.15	12.1	17.0	7.32	205	1.51	14.05	14.18	1.39	3918
R+6	29.1	45.7	0.30	0.21	23.57	1.21	12.1	22.1	7.71	221	1.51	18.75	18.93	1.46	4122
R+8	31.7	61.2	0.30	0.21	25.29	1.66	12.6	32.4	10.57	370	1.43	27.08	28.13	1.94	5758
R+8	35.3	46.4	0.30	0.21	28.11	1.69	12.6	27.3	10.76	380	1.43	22.58	23.55	1.97	5862
R+10	42.9	40.4	0.35	0.24	29.49	1.74	13.5	28.9	11.08	425	1.30	22.47	23.44	1.51	6986
R+10	42.4	52.5	0.35	0.24	29.18	1.73	13.5	37.1	11.02	421	1.30	29.25	30.43	1.51	6946

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 6.51 %														
F+2	6.9	45.2	0.23	0.16	7.21	0.60	10.8	5.2	3.82	69	0.00	5.34	5.55	1.22	1577
F+2	6.5	40.4	0.23	0.16	6.80	0.57	10.8	4.4	3.63	63	0.00	4.50	4.66	1.16	1496
F+4	15.0	48.3	0.27	0.19	13.33	0.93	12.3	12.1	5.94	151	0.00	10.95	11.41	1.35	2900
F+4	15.3	37.0	0.27	0.19	13.60	0.95	12.3	9.4	6.04	155	0.00	8.56	8.84	1.38	2950
F+6	22.9	36.8	0.30	0.20	18.65	1.18	13.1	14.1	7.52	231	0.00	11.90	12.28	1.44	4006
F+6	22.5	33.8	0.30	0.20	18.36	1.17	13.1	12.7	7.42	227	0.00	10.75	11.07	1.42	3954
F+8	30.7	36.8	0.31	0.21	23.83	1.42	13.4	18.8	9.07	312	0.00	15.64	16.14	1.58	5071
F+8	33.0	27.5	0.31	0.21	25.61	1.51	13.4	15.1	9.61	340	0.00	12.54	12.83	1.67	5369
F+10	39.2	35.5	0.32	0.22	29.95	1.69	13.5	23.2	10.78	408	0.00	19.10	19.66	1.81	6130
F+10	38.1	27.7	0.32	0.22	29.10	1.66	13.5	17.6	10.55	395	0.00	14.47	14.80	1.78	5998
Rill 6	slope = 6.09 %														
R+2	9.9	22.7	0.14	0.09	17.53	1.45	11.4	3.8	8.64	247	1.65	2.02	3.10	7.80	2265
R+2	10.3	21.9	0.14	0.09	18.17	1.49	11.4	3.8	8.88	257	1.65	2.02	3.13	8.02	2328
R+4	17.3	19.5	0.19	0.13	22.33	1.64	12.0	5.6	9.77	313	1.53	3.70	4.66	4.68	3520
R+4	25.9	14.5	0.19	0.13	33.35	1.96	12.0	6.3	11.68	409	1.53	4.28	5.37	5.59	4207
R+6	28.2	21.2	0.26	0.18	26.34	1.77	13.4	10.0	10.55	391	1.32	6.97	7.66	2.65	5243
R+6	28.8	21.9	0.26	0.18	26.91	1.80	13.4	10.5	10.72	401	1.32	7.42	8.10	2.69	5332
R+8	35.6	32.6	0.32	0.22	26.83	1.53	13.5	19.3	9.12	317	1.30	14.62	14.47	1.50	5603
R+8	36.4	59.7	0.32	0.22	27.47	1.56	13.5	36.2	9.29	326	1.30	28.50	27.89	1.53	5713
R+10	45.5	46.7	0.30	0.21	36.60	1.91	14.5	35.4	11.38	475	1.17	25.96	26.23	2.13	6556
R+10	44.8	48.6	0.30	0.21	36.10	1.90	14.5	36.3	11.32	471	1.17	26.66	26.92	2.12	6521
F+2	5.9	13.2	0.19	0.13	7.55	0.64	10.5	1.3	3.80	66	0.00	1.37	0.00	1.81	1372
F+2	6.1	12.0	0.19	0.13	7.79	0.65	10.5	1.2	3.90	69	0.00	1.28	0.00	1.86	1410
F+4	13.4	22.4	0.24	0.16	13.66	0.95	12.3	5.0	5.67	141	0.00	4.52	4.61	1.71	2575
F+4	13.8	22.6	0.24	0.16	14.06	0.98	12.3	5.2	5.82	147	0.00	4.70	4.78	1.75	2640
F+6	24.0	29.5	0.28	0.19	20.62	1.22	14.1	11.8	7.28	237	0.00	9.29	9.53	1.55	3934
F+6	24.6	29.7	0.28	0.19	21.10	1.25	14.1	12.2	7.43	244	0.00	9.58	9.82	1.58	4010
F+8	32.0	24.5	0.29	0.20	26.81	1.54	13.8	13.1	9.17	326	0.00	10.59	10.80	1.85	5081
F+8	33.6	28.4	0.29	0.20	28.13	1.60	13.8	15.9	9.52	345	0.00	12.85	13.15	1.93	5275
F+10	39.5	38.6	0.29	0.20	33.18	1.73	15.0	25.4	10.31	424	0.00	18.82	19.41	2.10	5693
F+10	39.0	35.3	0.29	0.20	32.75	1.71	15.0	22.9	10.21	418	0.00	16.99	17.47	2.08	5635

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 6.51 %														
R+0	3.2	43.9	0.15	0.11	5.11	0.63	8.0	2.4	4.01	55	2.57	0.73	0.00	2.87	1106
R+2	11.0	26.1	0.24	0.16	11.38	1.04	10.3	4.8	6.62	149	1.89	3.32	4.40	2.03	2788
R+2	11.0	26.3	0.24	0.16	11.36	1.04	10.3	4.8	6.62	149	1.89	3.34	4.42	2.03	2788
R+4	18.8	27.5	0.28	0.19	16.47	1.24	11.6	8.6	7.90	220	1.60	6.62	7.53	1.75	3912
R+4	28.0	30.4	0.28	0.19	24.56	1.67	11.6	14.2	10.63	344	1.60	11.96	12.99	2.35	5269
R+6	26.9	38.2	0.30	0.21	21.60	1.52	12.4	17.1	9.68	318	1.47	13.87	14.72	1.81	5225
R+6	27.1	40.7	0.30	0.21	21.81	1.53	12.4	18.4	9.74	321	1.47	15.04	15.87	1.82	5259
R+8	34.8	64.5	0.35	0.24	23.82	1.38	12.9	37.4	8.79	286	1.39	30.92	31.94	1.19	5577
R+8	32.0	74.4	0.35	0.24	21.90	1.39	12.9	39.7	8.85	289	1.39	32.87	34.01	1.19	5617
R+10	36.8	59.4	0.36	0.25	24.55	1.46	13.6	36.4	9.30	330	1.28	28.43	29.44	1.19	6050
F+2	7.4	41.9	0.26	0.18	6.80	0.59	10.3	5.1	3.77	64	0.00	5.58	5.82	0.93	1775
F+2	7.7	41.2	0.26	0.18	7.07	0.61	10.3	5.3	3.90	67	0.00	5.71	5.94	0.96	1835
F+4	15.4	43.1	0.30	0.20	12.55	0.92	11.6	11.1	5.85	141	0.00	10.57	11.01	1.12	3118
F+4	15.8	44.1	0.30	0.20	12.89	0.94	11.6	11.6	5.99	145	0.00	11.12	11.59	1.15	3189
F+6	24.7	53.9	0.30	0.21	20.06	1.26	13.0	22.2	8.03	253	0.00	18.94	19.83	1.53	4291
F+6	23.5	51.1	0.30	0.21	19.07	1.21	13.0	20.0	7.71	237	0.00	17.11	17.87	1.47	4118
F+8	30.2	39.5	0.32	0.22	22.88	1.32	14.4	19.9	8.39	298	0.00	15.38	15.92	1.39	4813
F+8	33.1	33.9	0.32	0.22	25.05	1.42	14.4	18.7	9.04	333	0.00	14.45	14.88	1.49	5183
F+10	39.7	43.9	0.36	0.25	26.84	1.45	15.3	29.0	9.21	364	0.00	21.12	22.01	1.22	5905
F+10	39.2	45.0	0.36	0.25	26.54	1.43	15.3	29.4	9.13	359	0.00	21.44	22.37	1.21	5851
Rill 5	slope = 6.51 %														
R+2	10.4	29.1	0.19	0.13	13.12	1.20	11.0	5.0	7.64	198	1.72	3.38	4.52	3.50	2634
R+2	11.2	27.3	0.19	0.13	14.13	1.27	11.0	5.1	8.09	216	1.72	3.44	4.65	3.70	2788
R+4	19.9	42.8	0.27	0.19	17.71	1.15	11.3	14.1	7.32	190	1.67	12.30	12.51	1.68	3561
R+4	27.6	41.9	0.27	0.19	24.64	1.25	11.3	19.3	7.96	216	1.67	17.38	17.68	1.83	3870
R+6	27.2	37.5	0.30	0.21	22.06	1.15	12.1	17.0	7.32	205	1.51	14.05	14.18	1.39	3918
R+6	29.1	45.7	0.30	0.21	23.57	1.21	12.1	22.1	7.71	221	1.51	18.75	18.93	1.46	4122
R+8	31.7	61.2	0.30	0.21	25.29	1.66	12.6	32.4	10.57	370	1.43	27.08	28.13	1.94	5758
R+8	35.3	46.4	0.30	0.21	28.11	1.69	12.6	27.3	10.76	380	1.43	22.58	23.55	1.97	5862
R+10	42.9	40.4	0.35	0.24	29.49	1.74	13.5	28.9	11.08	425	1.30	22.47	23.44	1.51	6986
R+10	42.4	52.5	0.35	0.24	29.18	1.73	13.5	37.1	11.02	421	1.30	29.25	30.43	1.51	6946

RILL DATA ANALYSIS SOIL: GASTON DATE: JUNE 13, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 6.51 %														
F+2	6.9	45.2	0.23	0.16	7.21	0.60	10.8	5.2	3.82	69	0.00	5.34	5.55	1.22	1577
F+2	6.5	40.4	0.23	0.16	6.80	0.57	10.8	4.4	3.63	63	0.00	4.50	4.66	1.16	1496
F+4	15.0	48.3	0.27	0.19	13.33	0.93	12.3	12.1	5.94	151	0.00	10.95	11.41	1.35	2900
F+4	15.3	37.0	0.27	0.19	13.60	0.95	12.3	9.4	6.04	155	0.00	8.56	8.84	1.38	2950
F+6	22.9	36.8	0.30	0.20	18.65	1.18	13.1	14.1	7.52	231	0.00	11.90	12.28	1.44	4006
F+6	22.5	33.8	0.30	0.20	18.36	1.17	13.1	12.7	7.42	227	0.00	10.75	11.07	1.42	3954
F+8	30.7	36.8	0.31	0.21	23.83	1.42	13.4	18.8	9.07	312	0.00	15.64	16.14	1.58	5071
F+8	33.0	27.5	0.31	0.21	25.61	1.51	13.4	15.1	9.61	340	0.00	12.54	12.83	1.67	5369
F+10	39.2	35.5	0.32	0.22	29.95	1.69	13.5	23.2	10.78	408	0.00	19.10	19.66	1.81	6130
F+10	38.1	27.7	0.32	0.22	29.10	1.66	13.5	17.6	10.55	395	0.00	14.47	14.80	1.78	5998
Rill 6	slope = 6.09 %														
R+2	9.9	22.7	0.14	0.09	17.53	1.45	11.4	3.8	8.64	247	1.65	2.02	3.10	7.80	2265
R+2	10.3	21.9	0.14	0.09	18.17	1.49	11.4	3.8	8.88	257	1.65	2.02	3.13	8.02	2328
R+4	17.3	19.5	0.19	0.13	22.33	1.64	12.0	5.6	9.77	313	1.53	3.70	4.66	4.68	3520
R+4	25.9	14.5	0.19	0.13	33.35	1.96	12.0	6.3	11.68	409	1.53	4.28	5.37	5.59	4207
R+6	28.2	21.2	0.26	0.18	26.34	1.77	13.4	10.0	10.55	391	1.32	6.97	7.66	2.65	5243
R+6	28.8	21.9	0.26	0.18	26.91	1.80	13.4	10.5	10.72	401	1.32	7.42	8.10	2.69	5332
R+8	35.6	32.6	0.32	0.22	26.83	1.53	13.5	19.3	9.12	317	1.30	14.62	14.47	1.50	5603
R+8	36.4	59.7	0.32	0.22	27.47	1.56	13.5	36.2	9.29	326	1.30	28.50	27.89	1.53	5713
R+10	45.5	46.7	0.30	0.21	36.60	1.91	14.5	35.4	11.38	475	1.17	25.96	26.23	2.13	6556
R+10	44.8	48.6	0.30	0.21	36.10	1.90	14.5	36.3	11.32	471	1.17	26.66	26.92	2.12	6521
F+2	5.9	13.2	0.19	0.13	7.55	0.64	10.5	1.3	3.80	66	0.00	1.37	0.00	1.81	1372
F+2	6.1	12.0	0.19	0.13	7.79	0.65	10.5	1.2	3.90	69	0.00	1.28	0.00	1.86	1410
F+4	13.4	22.4	0.24	0.16	13.66	0.95	12.3	5.0	5.67	141	0.00	4.52	4.61	1.71	2575
F+4	13.8	22.6	0.24	0.16	14.06	0.98	12.3	5.2	5.82	147	0.00	4.70	4.78	1.75	2640
F+6	24.0	29.5	0.28	0.19	20.62	1.22	14.1	11.8	7.28	237	0.00	9.29	9.53	1.55	3934
F+6	24.6	29.7	0.28	0.19	21.10	1.25	14.1	12.2	7.43	244	0.00	9.58	9.82	1.58	4010
F+8	32.0	24.5	0.29	0.20	26.81	1.54	13.8	13.1	9.17	326	0.00	10.59	10.80	1.85	5081
F+8	33.6	28.4	0.29	0.20	28.13	1.60	13.8	15.9	9.52	345	0.00	12.85	13.15	1.93	5275
F+10	39.5	38.6	0.29	0.20	33.18	1.73	15.0	25.4	10.31	424	0.00	18.82	19.41	2.10	5693
F+10	39.0	35.3	0.29	0.20	32.75	1.71	15.0	22.9	10.21	418	0.00	16.99	17.47	2.08	5635

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 81.18 Kinematic Viscosity = 1.06×10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 56.61 $g/mn/m^2$

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 1	slope = 12.18 %														
R+0	4.1	63.2	0.19	0.13	5.40	0.60	7.5	4.4	7.09	115	4.84	1.62	0.00	3.48	1044
R+2	12.1	66.3	0.32	0.22	9.16	0.82	9.4	13.4	9.71	230	3.69	12.22	11.73	1.60	2472
R+2	11.4	49.4	0.32	0.22	8.63	0.79	9.4	9.4	9.35	218	3.69	7.47	7.81	1.54	2381
R+4	18.8	65.6	0.39	0.27	11.53	0.94	11.3	20.5	11.20	342	2.91	17.35	17.48	1.22	3503
R+4	18.0	42.9	0.39	0.27	11.06	0.92	11.3	12.9	10.96	331	2.91	9.81	10.76	1.19	3428
R+6	24.8	59.5	0.41	0.28	14.70	1.11	11.9	24.6	13.17	461	2.71	20.28	21.08	1.34	4264
R+6	25.0	45.1	0.41	0.28	14.81	1.12	11.9	18.8	13.29	467	2.71	14.86	16.05	1.35	4302
R+8	32.7	86.2	0.43	0.30	18.44	1.25	12.5	47.0	14.83	580	2.53	39.23	39.98	1.36	5052
R+8	31.8	65.5	0.43	0.30	17.96	1.22	12.5	34.7	14.54	562	2.53	28.35	29.19	1.34	4950
R+10	39.1	61.4	0.40	0.28	23.56	1.48	13.8	40.0	17.58	822	2.21	30.11	31.37	1.84	5603
R+10	38.9	90.0	0.40	0.28	23.44	1.47	13.8	58.4	17.52	818	2.21	44.96	46.28	1.84	5584
F+2	6.0	25.1	0.24	0.16	6.22	0.77	6.3	2.5	9.12	140	0.00	4.48	4.52	2.80	1698
F+2	6.5	23.0	0.24	0.16	6.67	0.81	6.3	2.5	9.61	151	0.00	4.41	4.45	2.96	1790
F+4	14.4	69.4	0.30	0.21	11.57	1.11	7.5	16.7	13.24	293	0.00	24.67	25.40	2.47	3165
F+4	13.9	47.7	0.30	0.21	11.18	1.08	7.5	11.1	12.91	282	0.00	16.39	16.72	2.41	3087
F+6	19.9	72.6	0.32	0.22	14.96	1.21	9.4	24.1	14.39	415	0.00	28.52	29.38	2.35	3673
F+6	19.4	102.8	0.32	0.22	14.59	1.19	9.4	33.2	14.12	404	0.00	39.37	41.08	2.31	3605
F+8	28.3	123.4	0.39	0.27	17.56	1.28	10.6	58.2	15.23	513	0.00	60.82	64.55	1.70	4711
F+8	24.3	164.3	0.39	0.27	15.09	1.13	10.6	66.5	13.52	429	0.00	69.57	75.60	1.51	4182
F+10	30.0	121.7	0.39	0.27	18.54	1.21	12.5	60.9	14.45	558	0.00	54.14	57.33	1.59	4497
F+10	32.0	110.8	0.39	0.27	19.76	1.28	12.5	59.1	15.22	602	0.00	52.53	55.28	1.67	4734
Rill 2	slope = 11.99 %														
R+0	4.4	60.3	0.19	0.13	5.67	0.55	8.1	4.4	6.46	108	4.40	1.62	0.00	3.13	971
R+2	11.1	65.2	0.33	0.23	8.09	0.70	9.4	12.0	8.22	179	3.69	10.58	9.86	1.26	2194
R+2	11.0	54.6	0.33	0.23	8.05	0.70	9.4	10.0	8.22	179	3.69	8.20	8.18	1.26	2194
R+4	17.4	62.7	0.38	0.26	11.13	0.82	11.3	18.2	9.62	273	2.91	15.08	15.29	1.13	2940
R+6	26.5	51.1	0.44	0.30	14.73	1.01	12.5	22.5	11.85	414	2.53	17.49	18.54	1.06	4152
R+6	26.2	56.3	0.44	0.30	14.61	1.01	12.5	24.6	11.80	411	2.53	19.37	20.32	1.06	4131
R+8	33.1	60.4	0.48	0.33	16.68	1.10	13.1	33.3	12.85	491	2.36	25.86	26.88	0.94	4978
R+8	32.0	59.1	0.48	0.33	16.13	1.09	13.1	31.6	12.73	484	2.36	24.36	25.38	0.93	4933
R+10	35.6	81.9	0.47	0.32	18.35	1.18	14.4	48.5	13.85	601	2.08	35.44	36.66	1.06	5235
R+10	37.7	79.9	0.47	0.32	19.47	1.24	14.4	50.3	14.50	644	2.08	36.79	38.13	1.11	5479

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 11.99 %														
F+2	3.9	20.5	0.22	0.15	4.25	0.56	6.3	1.3	6.62	86	0.00	2.34	2.36	2.31	1174
F+2	4.5	17.5	0.22	0.15	4.90	0.63	6.3	1.3	7.44	103	0.00	2.30	2.32	2.60	1319
F+4	11.0	68.2	0.28	0.19	9.66	0.93	8.1	12.5	10.94	239	0.00	17.09	17.55	2.44	2428
F+4	11.0	59.4	0.28	0.19	9.68	0.93	8.1	10.9	10.96	239	0.00	14.91	15.26	2.44	2432
F+6	22.9	91.1	0.35	0.24	15.70	1.25	9.4	34.8	14.70	429	0.00	41.24	43.01	1.99	4183
F+6	23.6	56.4	0.35	0.24	16.14	1.28	9.4	22.2	15.00	442	0.00	26.25	26.93	2.03	4269
F+8	33.2	49.3	0.38	0.26	21.12	1.35	12.5	27.3	15.81	638	0.00	24.26	24.79	1.85	4845
F+8	34.7	60.0	0.38	0.26	22.08	1.40	12.5	34.7	16.38	673	0.00	30.83	31.66	1.92	5018
F+10	41.3	64.3	0.43	0.30	23.14	1.37	13.8	44.2	16.06	718	0.00	35.74	36.89	1.46	5584
F+10	40.9	89.7	0.43	0.30	22.91	1.36	13.8	61.1	15.93	710	0.00	49.36	51.62	1.45	5539
Rill 3	slope = 12.03 %														
R+2	10.9	54.7	0.29	0.20	9.27	0.80	11.3	9.9	9.36	261	2.91	6.90	5.95	1.96	2139
R+2	11.1	50.2	0.29	0.20	9.47	0.81	11.3	9.3	9.54	269	2.91	6.28	5.89	1.99	2179
R+4	17.9	55.8	0.33	0.23	13.03	1.04	11.9	16.6	12.24	413	2.71	12.85	13.45	1.88	3267
R+4	17.9	54.9	0.33	0.23	13.05	1.04	11.9	16.4	12.24	413	2.71	12.63	13.26	1.88	3267
R+6	25.0	66.4	0.38	0.26	15.99	1.15	12.5	27.6	13.54	505	2.53	22.03	22.38	1.61	4107
R+6	23.3	41.7	0.38	0.26	14.95	1.10	12.5	16.2	12.89	470	2.53	11.88	12.80	1.53	3910
R+8	31.8	51.0	0.38	0.26	20.11	1.23	15.0	27.0	14.48	671	1.95	18.07	18.86	1.67	4454
R+8	29.5	68.4	0.38	0.26	18.63	1.16	15.0	33.6	13.60	611	1.95	22.95	23.32	1.57	4183
R+10	35.9	68.5	0.43	0.30	20.11	1.23	15.6	41.0	14.48	699	1.83	27.35	27.86	1.31	5031
R+10	36.5	64.5	0.43	0.30	20.40	1.25	15.6	39.2	14.66	712	1.83	26.05	26.63	1.33	5092
F+2	6.0	15.5	0.23	0.16	6.19	0.76	6.3	1.5	8.98	137	0.00	2.75	2.76	2.78	1688
F+2	6.0	17.1	0.23	0.16	6.21	0.76	6.3	1.7	9.00	137	0.00	3.03	3.05	2.78	1690
F+4	14.0	43.1	0.30	0.20	11.45	1.06	8.1	10.1	12.50	292	0.00	13.80	14.04	2.40	2982
F+4	10.5	44.8	0.30	0.20	8.58	0.85	8.1	7.9	9.99	208	0.00	10.75	10.96	1.92	2382
F+6	21.3	76.3	0.32	0.22	16.26	1.09	12.5	27.1	12.81	465	0.00	24.11	24.84	2.15	3268
F+6	22.5	48.8	0.32	0.22	17.12	1.14	12.5	18.3	13.37	496	0.00	16.24	16.55	2.24	3411
F+8	28.4	54.2	0.37	0.25	18.70	1.18	13.1	25.7	13.93	554	0.00	21.75	22.27	1.74	4118
F+8	31.4	47.6	0.37	0.25	20.67	1.28	13.1	24.9	15.13	627	0.00	21.12	21.55	1.89	4470
F+10	37.0	47.1	0.37	0.25	24.27	1.21	17.5	29.0	14.22	761	0.00	18.40	18.76	1.77	4209
F+10	34.2	80.5	0.37	0.25	22.43	1.13	17.5	45.8	13.27	686	0.00	29.08	30.10	1.65	3928

RILL DATA ANALYSIS SOIL: OPEQUON DATE: JUNE 15, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 12.47 %														
R+2	11.0	68.4	0.30	0.21	8.92	0.82	10.0	12.6	10.00	257	3.40	10.57	10.68	1.89	2320
R+2	10.5	65.5	0.30	0.21	8.51	0.79	10.0	11.5	9.64	243	3.40	9.37	9.48	1.82	2235
R+4	17.6	75.9	0.37	0.25	11.68	0.95	11.9	22.3	11.59	380	2.71	18.14	18.07	1.47	3281
R+4	16.7	59.6	0.37	0.25	11.05	0.91	11.9	16.5	11.10	357	2.71	12.77	13.13	1.41	3143
R+6	24.2	61.6	0.36	0.25	16.25	1.23	12.5	24.8	15.01	590	2.53	19.51	20.38	1.96	4187
R+6	23.2	49.7	0.36	0.25	15.60	1.20	12.5	19.2	14.64	568	2.53	14.56	15.67	1.91	4084
R+8	31.9	52.7	0.43	0.30	17.88	1.28	13.1	28.0	15.56	654	2.36	21.32	22.16	1.41	5200
R+8	30.6	67.4	0.43	0.30	17.15	1.24	13.1	34.3	15.13	627	2.36	26.69	27.23	1.38	5057
R+10	36.8	83.1	0.46	0.32	19.31	1.35	13.1	50.9	16.41	708	2.36	40.76	41.22	1.31	5861
R+10	37.9	54.3	0.46	0.32	19.90	1.38	13.1	34.3	16.84	736	2.36	26.65	27.48	1.34	6013
F+2	4.6	2.9	0.23	0.16	4.75	0.62	6.3	0.2	7.55	105	0.00	0.39	0.00	2.35	1364
F+2	4.5	1.8	0.23	0.16	4.71	0.61	6.3	0.1	7.49	104	0.00	0.25	0.00	2.33	1353
F+4	12.0	23.6	0.35	0.24	8.41	0.88	7.5	4.7	10.68	212	0.00	7.01	7.09	1.50	2868
F+4	11.6	13.4	0.35	0.24	8.09	0.85	7.5	2.6	10.36	203	0.00	3.84	3.87	1.46	2783
F+6	19.6	34.0	0.39	0.27	12.33	0.96	10.6	11.1	11.75	347	0.00	11.64	11.83	1.34	3509
F+6	19.2	43.4	0.39	0.27	12.07	0.95	10.6	13.9	11.54	338	0.00	14.54	14.85	1.31	3449
F+8	26.5	97.5	0.42	0.29	15.19	1.03	12.5	43.1	12.54	450	0.00	38.27	40.23	1.19	4102
F+8	26.5	90.7	0.42	0.29	15.20	1.03	12.5	40.1	12.55	451	0.00	35.61	37.30	1.19	4105
F+10	35.2	63.8	0.44	0.30	19.28	1.21	13.1	37.4	14.81	607	0.00	31.69	32.71	1.28	5071
F+10	31.6	80.0	0.44	0.30	17.30	1.11	13.1	42.1	13.53	530	0.00	35.67	37.16	1.17	4634
Rill 5	slope = 11.61 %														
R+2	11.0	52.1	0.32	0.22	8.24	0.74	10.0	9.5	8.41	198	3.40	7.16	7.90	1.38	2250
R+2	10.4	42.7	0.32	0.22	7.80	0.71	10.0	7.4	8.07	186	3.40	4.79	5.94	1.32	2158
R+4	16.2	73.4	0.38	0.26	10.30	0.86	11.3	19.9	9.71	277	2.91	16.70	16.46	1.13	3083
R+4	17.6	63.6	0.38	0.26	11.15	0.90	11.3	18.6	10.23	299	2.91	15.46	15.64	1.19	3245
R+6	24.1	65.7	0.41	0.28	14.12	1.09	11.9	26.4	12.39	420	2.71	21.99	22.33	1.23	4258
R+6	24.0	58.6	0.41	0.28	14.08	1.09	11.9	23.5	12.33	417	2.71	19.26	19.79	1.22	4238
R+8	31.7	50.1	0.41	0.28	18.57	1.29	12.5	26.5	14.60	566	2.53	21.00	21.87	1.45	5016
R+8	31.4	49.4	0.41	0.28	18.40	1.28	12.5	25.9	14.54	563	2.53	20.46	21.35	1.44	4997
R+10	39.2	61.1	0.46	0.31	20.78	1.39	13.1	39.9	15.79	669	2.36	31.44	32.11	1.28	6006
R+10	41.0	54.2	0.46	0.31	21.74	1.44	13.1	37.1	16.31	701	2.36	29.03	29.83	1.32	6200

RILL DATA ANALYSIS SOIL: OPEQUON DATE: JUNE 15, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 5	slope = 11.61 %														
F+2	5.0	8.4	0.24	0.17	4.97	0.64	6.3	0.7	7.29	100	0.00	1.24	0.00	2.10	1468
F+2	5.4	9.7	0.24	0.17	5.38	0.68	6.3	0.9	7.76	110	0.00	1.54	0.00	2.24	1564
F+4	12.0	26.8	0.31	0.22	9.29	0.99	6.9	5.4	11.20	209	0.00	8.69	8.80	1.93	2918
F+4	13.3	24.1	0.31	0.22	10.28	1.06	6.9	5.3	12.04	233	0.00	8.62	8.72	2.08	3136
F+6	22.2	29.9	0.36	0.25	15.04	1.21	9.4	11.0	13.78	389	0.00	13.07	13.26	1.83	4089
F+6	21.4	30.8	0.36	0.25	14.54	1.18	9.4	11.0	13.43	375	0.00	13.03	13.22	1.79	3986
F+8	29.8	50.6	0.42	0.29	17.35	1.23	11.3	25.1	13.93	475	0.00	24.83	25.52	1.36	4826
F+8	29.9	35.3	0.42	0.29	17.39	1.23	11.3	17.6	13.95	476	0.00	17.37	17.70	1.36	4834
F+10	35.8	69.6	0.42	0.29	20.79	1.33	12.5	41.5	15.12	596	0.00	36.91	38.25	1.47	5241
F+10	35.1	70.5	0.42	0.29	20.39	1.31	12.5	41.2	14.88	582	0.00	36.65	38.01	1.45	5158
Rill 6	slope = 11.61 %														
R+0	3.6	73.9	0.17	0.12	5.24	0.50	9.4	4.5	5.68	103	3.69	1.60	2.85	3.43	791
R+2	12.0	79.5	0.32	0.22	9.05	0.73	11.3	15.9	8.29	218	2.91	12.78	13.36	1.36	2214
R+2	10.9	66.9	0.32	0.22	8.23	0.67	11.3	12.2	7.61	192	2.91	9.10	9.80	1.25	2032
R+4	17.1	85.0	0.39	0.27	10.56	0.83	11.9	24.3	9.43	279	2.71	20.01	20.52	1.03	3085
R+4	16.6	65.6	0.39	0.27	10.22	0.81	11.9	18.1	9.20	269	2.71	14.25	15.08	1.01	3010
R+6	23.0	83.5	0.47	0.32	11.91	0.92	12.5	31.9	10.45	343	2.53	25.87	26.55	0.81	4059
R+6	26.1	92.2	0.47	0.32	13.55	1.02	12.5	40.2	11.59	400	2.53	33.17	34.09	0.90	4500
R+8	31.3	52.6	0.48	0.33	15.94	1.16	13.1	27.5	13.18	510	2.36	20.89	22.20	0.99	5215
R+8	29.5	55.9	0.48	0.33	15.01	1.11	13.1	27.5	12.61	477	2.36	20.91	22.15	0.94	4990
R+10	39.8	73.5	0.52	0.36	18.55	1.22	13.8	48.8	13.86	576	2.21	37.22	38.59	0.87	5994
R+10	38.5	68.7	0.52	0.36	17.95	1.19	13.8	44.1	13.52	555	2.21	33.44	34.71	0.85	5847
F+2	4.1	9.3	0.23	0.16	4.31	0.57	6.3	0.6	6.49	84	0.00	1.12	0.00	2.07	1241
F+2	4.3	7.7	0.23	0.16	4.49	0.59	6.3	0.5	6.71	88	0.00	0.97	0.00	2.15	1285
F+4	12.5	22.6	0.32	0.22	9.39	0.99	6.9	4.7	11.28	212	0.00	7.64	7.73	1.83	3032
F+4	11.8	22.8	0.32	0.22	8.87	0.95	6.9	4.5	10.83	199	0.00	7.27	7.35	1.76	2909
F+6	21.0	34.8	0.37	0.25	13.77	1.13	9.4	12.2	12.88	352	0.00	14.41	14.67	1.61	3949
F+6	21.1	40.9	0.37	0.25	13.86	1.14	9.4	14.4	12.95	355	0.00	17.05	17.41	1.61	3970
F+8	29.0	40.0	0.41	0.28	17.02	1.21	11.3	19.3	13.72	464	0.00	19.06	19.47	1.37	4703
F+8	26.6	46.3	0.41	0.28	15.63	1.13	11.3	20.5	12.81	419	0.00	20.27	20.79	1.28	4393
F+10	35.0	56.7	0.45	0.31	19.04	1.24	12.5	33.1	14.08	536	0.00	29.43	30.38	1.20	5219
F+10	33.5	61.9	0.45	0.31	18.22	1.20	12.5	34.6	13.59	508	0.00	30.77	31.86	1.16	5036

RILL DATA ANALYSIS SOIL: FREDERICK DATE: JUNE 16, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 95.28 Kinematic Viscosity = 1.01 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 45.91 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 13.14 %														
R+0	3.6	62.5	0.21	0.14	4.19	0.57	6.6	3.7	7.33	124	4.60	1.73	0.00	2.89	1172
R+0	3.8	62.4	0.21	0.14	4.39	0.57	6.6	3.9	7.33	124	4.60	2.01	0.00	2.89	1172
R+2	10.9	79.7	0.36	0.25	7.35	0.78	8.1	14.5	10.03	246	3.56	16.23	17.68	1.31	2783
R+2	11.1	83.0	0.36	0.25	7.50	0.79	8.1	15.4	10.16	251	3.56	17.48	18.96	1.33	2819
R+4	19.8	120.8	0.41	0.28	11.82	1.10	9.1	39.8	14.08	456	3.12	45.69	48.60	1.45	4398
R+4	18.6	107.0	0.41	0.28	11.12	1.05	9.1	33.2	13.50	428	3.12	37.54	40.10	1.39	4217
R+6	27.3	268.4	0.44	0.30	15.18	1.27	10.6	122.2	16.27	665	2.55	125.14	136.62	1.45	5465
R+6	25.8	171.7	0.44	0.30	14.35	1.23	10.6	73.9	15.82	637	2.55	74.67	79.44	1.41	5314
R+8	33.7	159.8	0.42	0.29	19.37	1.15	11.3	89.6	14.73	606	2.36	86.15	92.45	1.41	4780
R+8	31.8	145.2	0.42	0.29	18.29	1.45	11.3	76.9	18.58	859	2.36	73.62	77.85	1.78	6032
R+10	37.7	162.0	0.41	0.28	22.40	1.33	11.9	101.8	17.10	801	2.20	92.97	99.31	1.74	5375
R+10	41.6	178.1	0.41	0.28	24.73	1.55	11.9	123.5	19.87	1003	2.20	113.30	120.93	2.03	6244
F+2	6.7	54.6	0.21	0.15	7.69	0.70	9.4	6.1	9.06	244	0.00	7.27	7.36	3.40	1483
F+2	6.9	45.3	0.21	0.15	7.85	0.72	9.4	5.2	9.22	250	0.00	6.16	6.22	3.46	1511
F+4	15.1	69.2	0.27	0.19	13.41	1.05	10.3	17.4	13.52	489	0.00	18.79	19.14	3.08	2846
F+4	14.0	57.8	0.27	0.19	12.47	0.99	10.3	13.5	12.74	447	0.00	14.60	14.82	2.90	2682
F+6	23.4	66.9	0.33	0.23	17.13	1.25	10.6	26.1	16.12	656	0.00	27.32	27.88	2.49	4117
F+6	21.5	55.3	0.33	0.23	15.72	1.17	10.6	19.8	15.07	593	0.00	20.70	21.05	2.33	3849
F+8	34.5	53.5	0.36	0.25	23.45	1.55	11.1	30.8	19.96	946	0.00	30.73	31.24	2.66	5489
F+8	29.7	53.0	0.36	0.25	20.15	1.39	11.1	26.2	17.82	798	0.00	26.17	26.61	2.37	4900
F+10	38.4	52.1	0.40	0.28	23.25	1.50	11.8	33.4	19.31	950	0.00	31.56	32.12	2.04	5964
F+10	36.1	115.0	0.40	0.28	21.81	1.43	11.8	69.1	18.39	883	0.00	65.35	68.05	1.94	5680
Rill 2	slope = 13.11 %														
R+0	3.6	63.4	0.20	0.14	4.39	0.52	7.5	3.8	6.60	121	3.93	1.77	0.00	2.77	1026
R+0	3.7	66.2	0.20	0.14	4.50	0.52	7.5	4.1	6.60	121	3.93	2.18	0.00	2.77	1026
R+2	11.6	93.4	0.38	0.26	7.49	0.76	8.8	18.0	9.68	251	3.26	19.64	21.05	1.17	2805
R+2	11.3	106.5	0.38	0.26	7.30	0.75	8.8	20.0	9.55	246	3.26	22.20	23.38	1.15	2768
R+4	18.9	146.2	0.41	0.28	11.09	1.07	8.9	46.1	13.66	430	3.17	54.15	57.58	1.35	4366
R+4	19.9	125.0	0.41	0.28	11.69	1.09	8.9	41.5	13.98	445	3.17	48.47	51.62	1.39	4469
R+6	29.2	208.4	0.42	0.29	16.91	1.33	10.2	101.5	17.06	684	2.69	107.94	116.19	1.65	5517
R+6	28.9	130.8	0.42	0.29	16.73	1.33	10.2	63.0	16.99	680	2.69	65.99	69.99	1.64	5497
R+8	38.4	116.2	0.42	0.29	21.96	1.16	11.7	74.4	14.88	639	2.25	68.51	72.90	1.40	4877
R+8	33.9	197.1	0.42	0.29	19.38	1.49	11.7	111.4	19.05	926	2.25	103.68	110.54	1.79	6243
R+10	41.5	227.5	0.42	0.29	23.92	1.36	12.0	157.5	17.44	833	2.17	143.68	157.81	1.67	5674
R+10	43.7	140.9	0.42	0.29	25.16	1.58	12.0	102.6	20.26	1043	2.17	92.87	98.25	1.94	6591

RILL DATA ANALYSIS SOIL: FREDERICK DATE: JUNE 16, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 2	slope = 13.11 %														
F+2	7.4	61.3	0.24	0.16	7.52	0.73	8.8	7.6	9.30	237	0.00	9.62	9.78	2.76	1720
F+2	7.9	57.5	0.24	0.16	7.99	0.76	8.8	7.6	9.79	255	0.00	9.60	9.75	2.90	1810
F+4	15.0	60.2	0.30	0.21	12.02	0.97	10.1	15.0	12.47	425	0.00	16.46	16.76	2.32	2907
F+4	15.8	62.8	0.30	0.21	12.71	1.02	10.1	16.6	13.06	455	0.00	18.18	18.52	2.43	3044
F+6	23.2	52.4	0.32	0.22	17.81	1.27	10.9	20.3	16.31	686	0.00	20.57	20.88	2.77	3980
F+6	24.2	49.2	0.32	0.22	18.59	1.31	10.9	19.9	16.86	721	0.00	20.19	20.47	2.87	4114
F+8	29.8	75.9	0.34	0.24	21.11	1.42	11.4	37.7	18.17	842	0.00	36.73	37.58	2.63	4805
F+8	30.1	56.6	0.34	0.24	21.35	1.43	11.4	28.4	18.33	853	0.00	27.68	28.15	2.66	4845
F+10	38.9	59.4	0.37	0.26	25.28	1.59	11.9	38.5	20.40	1043	0.00	36.03	36.71	2.49	5879
F+10	41.4	64.7	0.37	0.26	26.91	1.67	11.9	44.7	21.36	1117	0.00	41.76	42.62	2.60	6157
Rill 3	slope = 13.05 %														
R+0	3.2	74.2	0.21	0.15	3.58	0.48	7.0	3.9	6.13	101	4.26	1.95	2.37	2.27	1018
R+0	3.2	67.0	0.21	0.15	3.62	0.48	7.0	3.6	6.13	101	4.26	1.40	2.16	2.27	1018
R+2	10.9	83.7	0.36	0.25	7.27	0.81	8.1	15.1	10.28	255	3.56	17.13	19.06	1.33	2888
R+2	10.8	88.0	0.36	0.25	7.20	0.80	8.1	15.8	10.22	253	3.56	18.00	19.85	1.32	2870
R+4	18.1	118.2	0.42	0.29	10.52	1.03	9.0	35.7	13.15	409	3.15	40.93	43.28	1.28	4261
R+4	19.7	156.1	0.42	0.29	11.43	1.07	9.0	51.2	13.67	433	3.15	60.08	63.33	1.33	4426
R+6	28.8	149.0	0.45	0.31	15.66	1.27	10.8	71.6	16.16	669	2.49	71.07	75.00	1.38	5591
R+6	30.5	136.7	0.45	0.31	16.56	1.31	10.8	69.5	16.67	701	2.49	68.91	72.62	1.42	5768
R+8	32.4	175.7	0.42	0.29	18.95	1.20	11.1	95.0	15.26	632	2.40	92.42	98.76	1.50	4913
R+8	37.4	152.2	0.42	0.29	21.83	1.37	11.1	94.8	17.43	772	2.40	92.19	97.76	1.72	5612
R+10	41.4	115.3	0.44	0.30	22.96	1.52	11.9	79.5	19.35	963	2.20	72.15	75.71	1.72	6555
R+10	37.2	132.1	0.44	0.30	20.65	1.57	11.9	81.9	20.05	1016	2.20	74.41	78.02	1.78	6793
F+2	7.4	64.9	0.24	0.17	7.44	0.72	8.8	8.0	9.18	232	0.00	10.12	10.30	2.70	1710
F+2	6.9	56.3	0.24	0.17	6.93	0.68	8.8	6.4	8.64	212	0.00	8.17	8.29	2.54	1610
F+4	16.0	73.9	0.28	0.19	14.08	1.12	9.8	19.7	14.37	509	0.00	22.31	22.75	3.21	3071
F+4	14.7	51.3	0.28	0.19	12.91	1.05	9.8	12.5	13.42	459	0.00	14.20	14.39	3.00	2868
F+6	22.9	51.2	0.33	0.22	16.96	1.25	10.5	19.5	15.99	640	0.00	20.63	20.95	2.54	4054
F+6	22.0	51.7	0.33	0.22	16.32	1.22	10.5	18.9	15.52	612	0.00	20.05	20.37	2.47	3935
F+8	28.9	71.3	0.35	0.24	20.26	1.37	11.4	34.4	17.51	799	0.00	33.41	34.15	2.48	4706
F+8	29.8	61.0	0.35	0.24	20.88	1.40	11.4	30.3	17.92	827	0.00	29.44	30.00	2.53	4815
F+10	37.3	62.7	0.37	0.26	24.38	1.54	12.1	39.0	19.62	999	0.00	35.95	36.67	2.42	5647
F+10	37.1	64.8	0.37	0.26	24.23	1.53	12.1	40.0	19.52	991	0.00	36.88	37.64	2.41	5620

RILL DATA ANALYSIS SOIL: FREDERICK DATE: JUNE 16, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 4	slope = 12.81 %														
R+0	3.5	55.5	0.21	0.14	4.07	0.43	7.1	3.2	5.39	84	4.22	0.83	0.00	2.14	880
R+0	3.5	61.1	0.21	0.14	4.08	0.43	7.1	3.5	5.39	84	4.22	1.35	0.00	2.14	880
R+2	10.7	82.0	0.35	0.24	7.40	0.72	8.4	14.6	9.03	218	3.41	15.88	17.46	1.24	2507
R+2	10.4	91.1	0.35	0.24	7.18	0.71	8.4	15.8	8.84	211	3.41	17.39	18.76	1.21	2455
R+4	17.9	139.4	0.40	0.28	10.75	0.90	9.6	41.6	11.29	345	2.92	45.39	47.75	1.18	3598
R+4	18.6	113.9	0.40	0.28	11.20	0.93	9.6	35.4	11.66	363	2.92	38.19	40.33	1.22	3718
R+6	26.8	139.7	0.42	0.29	15.38	1.17	10.3	62.5	14.61	549	2.65	64.67	68.39	1.39	4881
R+6	28.2	147.5	0.42	0.29	16.14	1.20	10.3	69.2	14.98	570	2.65	71.93	76.20	1.42	5006
R+8	34.5	98.7	0.41	0.28	20.34	1.28	10.9	56.7	15.99	666	2.45	55.14	58.12	1.61	5191
R+8	35.3	129.5	0.41	0.28	20.84	1.51	10.9	76.2	18.87	855	2.45	74.98	78.89	1.90	6128
R+10	46.8	163.9	0.44	0.30	26.03	1.51	12.5	127.9	18.87	976	2.05	111.62	118.97	1.68	6502
R+10	40.7	162.4	0.44	0.30	22.64	1.76	12.5	110.2	22.01	1230	2.05	95.92	100.72	1.96	7582
F+2	7.3	48.4	0.24	0.16	7.37	0.72	8.6	5.9	9.09	223	0.00	7.62	7.72	2.69	1719
F+2	6.7	38.4	0.24	0.16	6.79	0.68	8.6	4.3	8.47	201	0.00	5.57	5.63	2.51	1602
F+4	14.1	61.7	0.30	0.21	11.47	0.94	10.0	14.5	11.84	388	0.00	16.16	16.47	2.25	2796
F+4	14.2	62.9	0.30	0.21	11.52	0.95	10.0	14.9	11.88	390	0.00	16.55	16.87	2.26	2805
F+6	22.2	43.9	0.33	0.23	16.18	1.19	10.8	16.3	14.89	592	0.00	16.72	16.95	2.27	3921
F+6	22.3	53.8	0.33	0.23	16.26	1.19	10.8	20.0	14.94	595	0.00	20.60	20.96	2.28	3935
F+8	32.4	45.4	0.35	0.24	22.68	1.49	11.6	24.5	18.64	886	0.00	23.55	23.88	2.65	5092
F+8	33.5	58.2	0.35	0.24	23.50	1.53	11.6	32.5	19.14	923	0.00	31.24	31.81	2.72	5230
F+10	40.4	42.4	0.38	0.26	25.88	1.60	12.1	28.6	20.09	1040	0.00	26.17	26.53	2.38	6007
F+10	39.9	36.9	0.38	0.26	25.53	1.59	12.1	24.5	19.89	1025	0.00	22.48	22.76	2.35	5947
Rill 5	slope = 12.39 %														
R+2	9.5	70.6	0.34	0.23	6.87	0.80	8.3	11.2	9.64	235	3.50	11.54	12.67	1.46	2641
R+2	10.3	75.6	0.34	0.23	7.41	0.84	8.3	12.9	10.19	256	3.50	13.89	15.33	1.54	2791
R+4	16.3	102.3	0.37	0.26	10.56	0.98	9.9	27.7	11.89	386	2.80	28.36	30.07	1.45	3625
R+4	18.2	145.1	0.37	0.26	11.80	1.02	9.9	43.9	12.31	407	2.80	46.59	48.86	1.50	3754
R+6	27.5	156.0	0.41	0.28	16.28	1.21	10.9	71.6	14.68	586	2.45	70.27	74.59	1.48	4917
R+6	29.5	177.8	0.41	0.28	17.45	1.27	10.9	87.5	15.34	627	2.45	86.41	92.33	1.55	5140
R+8	31.6	143.0	0.40	0.28	19.02	1.18	11.9	75.2	14.31	613	2.20	68.14	72.31	1.50	4705
R+8	33.7	143.2	0.40	0.28	20.30	1.30	11.9	80.4	15.77	709	2.20	73.00	77.44	1.65	5183
R+10	41.5	125.0	0.44	0.30	22.67	1.27	12.3	86.4	15.40	709	2.09	75.85	80.64	1.33	5580
R+10	38.7	84.8	0.44	0.30	21.16	1.38	12.3	54.7	16.74	803	2.09	47.30	49.90	1.44	6064

RILL DATA ANALYSIS SOIL: FREDERICK DATE: JUNE 16, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 12.39 %														
F+2	6.1	84.6	0.19	0.13	7.61	0.73	8.9	8.6	8.80	221	0.00	10.71	10.92	3.98	1391
F+2	6.0	31.0	0.19	0.13	7.47	0.71	8.9	3.1	8.67	216	0.00	3.86	3.89	3.93	1370
F+4	13.0	61.5	0.26	0.18	12.23	1.00	9.9	13.3	12.15	399	0.00	14.97	15.23	3.11	2554
F+4	12.7	40.4	0.26	0.18	11.93	0.98	9.9	8.5	11.91	387	0.00	9.59	9.70	3.05	2504
F+6	23.0	58.8	0.32	0.22	17.40	1.28	10.5	22.6	15.50	610	0.00	23.87	24.32	2.56	4056
F+6	22.7	45.7	0.32	0.22	17.19	1.27	10.5	17.3	15.35	602	0.00	18.31	18.58	2.54	4018
F+8	31.0	55.9	0.35	0.24	21.77	1.45	11.4	28.9	17.62	802	0.00	28.22	28.74	2.51	4968
F+8	30.4	55.3	0.35	0.24	21.36	1.43	11.4	28.1	17.37	785	0.00	27.39	27.89	2.47	4897
F+10	37.1	74.4	0.40	0.27	22.57	1.44	12.2	46.0	17.46	848	0.00	41.95	43.13	1.86	5690
F+10	38.7	84.8	0.40	0.27	23.53	1.49	12.2	54.7	18.03	889	0.00	49.88	51.48	1.92	5876
Rill 6	slope = 12.58 %														
R+2	9.7	62.3	0.31	0.21	7.61	0.76	7.8	10.1	9.29	211	3.74	10.66	12.76	1.64	2322
R+2	10.2	89.2	0.31	0.21	7.98	0.78	7.8	15.2	9.60	221	3.74	17.86	19.56	1.69	2398
R+4	17.4	99.4	0.36	0.25	11.72	0.98	9.4	28.9	12.06	374	2.99	31.23	33.37	1.57	3501
R+4	19.1	143.6	0.36	0.25	12.87	1.03	9.4	45.8	12.68	403	2.99	51.25	54.22	1.65	3679
R+6	26.7	198.6	0.44	0.30	14.59	1.09	11.3	88.4	13.35	523	2.36	84.91	91.41	1.15	4767
R+6	25.8	131.5	0.44	0.30	14.10	1.06	11.3	56.6	12.98	502	2.36	53.49	56.62	1.12	4636
R+8	33.1	153.6	0.42	0.29	19.29	1.23	11.6	84.6	15.14	649	2.28	79.07	84.25	1.49	5064
R+8	35.0	141.0	0.42	0.29	20.44	1.40	11.6	82.4	17.17	784	2.28	76.88	81.37	1.69	5743
R+10	44.9	126.9	0.44	0.30	24.63	1.45	12.3	95.0	17.85	880	2.11	84.09	89.06	1.55	6352
R+10	43.7	133.6	0.44	0.30	23.97	1.57	12.3	97.3	19.32	991	2.11	86.17	90.97	1.68	6878
F+2	7.1	8.4	0.21	0.14	8.27	0.80	8.4	1.0	9.90	251	0.00	1.31	1.32	3.89	1658
F+2	6.9	7.1	0.21	0.14	8.01	0.78	8.4	0.8	9.64	241	0.00	1.07	1.07	3.78	1613
F+4	17.9	74.1	0.29	0.20	15.08	1.19	9.8	22.1	14.66	521	0.00	25.15	25.70	3.01	3390
F+4	15.4	42.4	0.29	0.20	12.97	1.06	9.8	10.9	13.03	437	0.00	12.38	12.54	2.68	3013
F+6	22.8	53.2	0.30	0.20	18.53	1.33	10.7	20.2	16.34	673	0.00	21.00	21.32	3.12	3922
F+6	22.1	41.7	0.30	0.20	17.99	1.30	10.7	15.4	15.97	650	0.00	15.96	16.15	3.05	3833
F+8	30.5	54.8	0.35	0.24	21.29	1.43	11.3	27.9	17.63	798	0.00	27.40	27.89	2.47	4937
F+8	32.2	54.2	0.35	0.24	22.42	1.49	11.3	29.1	18.33	846	0.00	28.54	29.04	2.57	5132
F+10	37.5	48.5	0.35	0.24	25.80	1.60	12.1	30.3	19.73	1007	0.00	27.95	28.38	2.69	5601
F+10	39.7	35.9	0.35	0.24	27.27	1.67	12.1	23.7	20.55	1071	0.00	21.86	22.11	2.80	5836

RILL DATA ANALYSIS SOIL: MANOR DATE: JUNE 17, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 90.40 Kinematic Viscosity = 1.06 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 51.14 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.73 %														
R+0	4.8	71.9	0.23	0.16	5.01	0.56	7.2	5.8	4.58	64	4.60	4.35	6.95	1.42	1236
R+0	4.9	72.5	0.34	0.24	3.47	0.56	7.2	6.0	4.58	64	4.60	4.59	7.15	0.66	1821
R+2	12.3	61.7	0.34	0.24	8.69	0.94	7.8	12.7	7.70	151	4.17	13.90	15.85	1.10	3056
R+2	12.7	76.7	0.40	0.27	7.79	0.87	7.8	16.3	7.12	134	4.17	18.98	20.39	0.77	3253
R+4	19.4	74.2	0.40	0.27	11.86	1.10	9.7	24.0	9.01	237	3.19	24.29	25.72	0.97	4113
R+4	19.2	89.4	0.49	0.34	9.51	0.94	9.7	28.6	7.70	187	3.19	29.57	30.87	0.55	4340
R+6	29.9	66.3	0.49	0.34	14.84	1.16	11.6	33.1	9.50	306	2.54	29.23	30.69	0.67	5356
R+6	29.3	75.8	0.48	0.33	14.94	1.17	11.6	37.0	9.58	310	2.54	33.00	34.54	0.72	5248
R+8	33.3	84.7	0.48	0.33	16.99	1.28	11.9	47.0	10.48	364	2.45	41.52	43.40	0.79	5741
R+8	36.0	57.6	0.44	0.30	19.70	1.43	11.9	34.5	11.71	430	2.45	29.83	31.33	1.01	5974
R+10	43.9	81.9	0.44	0.30	24.03	1.80	12.8	59.9	14.74	655	2.21	49.75	51.73	1.28	7519
R+10	44.5	69.3	0.21	0.15	50.34	2.33	12.8	51.4	19.08	965	2.21	42.35	44.01	7.05	4714
F+2	6.3	7.0	0.21	0.15	7.18	0.80	7.0	0.7	6.58	107	0.00	1.18	0.00	2.43	1626
F+4	13.9	39.4	0.31	0.21	10.83	1.01	8.3	9.1	8.27	177	0.00	12.26	12.59	1.45	2963
F+4	13.9	49.0	0.31	0.21	10.81	1.01	8.3	11.3	8.25	177	0.00	15.25	15.76	1.45	2958
F+6	24.2	47.8	0.39	0.27	15.22	1.26	8.8	19.3	10.35	263	0.00	24.47	25.41	1.18	4602
F+6	23.7	50.9	0.39	0.27	14.92	1.25	8.8	20.1	10.20	258	0.00	25.54	26.59	1.16	4537
F+8	30.7	71.7	0.40	0.27	18.69	1.41	9.6	36.6	11.51	340	0.00	42.25	44.71	1.23	5275
F+8	31.2	78.9	0.40	0.27	19.01	1.42	9.6	41.0	11.64	346	0.00	47.32	50.37	1.25	5339
F+10	42.4	75.2	0.44	0.31	23.19	1.61	10.0	53.2	13.19	433	0.00	59.10	63.05	1.14	6749
F+10	42.8	65.3	0.44	0.31	23.40	1.62	10.0	46.7	13.27	437	0.00	51.84	54.82	1.14	6792
Rill 2	slope = 8.64 %														
R+0	4.1	69.8	0.22	0.15	4.54	0.53	7.0	4.8	4.48	60	4.75	2.90	3.49	1.56	1106
R+0	4.1	72.3	0.22	0.15	4.55	0.53	7.0	5.0	4.48	60	4.75	3.19	3.63	1.56	1106
R+2	12.2	69.7	0.37	0.25	8.04	0.86	8.1	14.2	7.27	144	3.97	15.42	16.88	0.91	2990
R+2	12.2	72.1	0.37	0.25	8.04	0.86	8.1	14.7	7.27	144	3.97	16.10	17.50	0.91	2990
R+4	19.8	87.9	0.41	0.28	11.73	1.07	9.4	29.0	9.05	231	3.33	30.99	32.82	0.92	4131
R+4	20.1	97.1	0.41	0.28	11.89	1.08	9.4	32.5	9.13	234	3.33	35.12	37.07	0.93	4170
R+6	26.7	81.0	0.48	0.33	13.63	1.20	10.6	36.1	10.15	311	2.84	34.85	37.01	0.76	5378
R+6	26.7	77.0	0.48	0.33	13.61	1.19	10.6	34.2	10.06	307	2.84	32.91	34.99	0.76	5333
R+8	33.6	70.3	0.50	0.34	16.37	1.27	11.8	39.4	10.74	374	2.48	34.77	36.95	0.73	5971
R+8	34.5	81.1	0.50	0.34	16.80	1.29	11.8	46.7	10.91	383	2.48	41.65	44.21	0.75	6065
R+10	39.6	96.2	0.48	0.33	20.24	1.46	12.2	63.5	12.34	478	2.36	55.55	59.11	0.93	6543
R+10	43.1	64.1	0.48	0.33	22.00	1.54	12.2	46.0	13.02	518	2.36	39.61	42.01	0.98	6902

RILL DATA ANALYSIS SOIL: MANOR DATE: JUNE 17, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 8.64 %														
F+2	7.1	26.1	0.24	0.16	7.25	0.82	6.9	3.1	6.91	113	0.00	5.01	0.00	2.06	1842
F+2	7.0	23.3	0.24	0.16	7.13	0.81	6.9	2.7	6.83	111	0.00	4.41	0.00	2.03	1819
F+4	14.8	47.8	0.33	0.23	10.76	1.04	7.7	11.8	8.80	182	0.00	17.10	17.69	1.33	3289
F+4	15.8	39.0	0.33	0.23	11.44	1.09	7.7	10.3	9.21	194	0.00	14.84	15.25	1.40	3442
F+6	22.1	50.5	0.39	0.27	13.82	1.17	8.9	18.6	9.89	250	0.00	23.28	24.19	1.11	4285
F+6	21.3	54.2	0.39	0.27	13.32	1.14	8.9	19.3	9.62	239	0.00	24.11	25.13	1.08	4168
F+8	29.5	68.9	0.40	0.28	17.77	1.37	9.4	33.8	11.56	335	0.00	39.84	41.99	1.21	5189
F+8	29.0	73.0	0.40	0.28	17.51	1.35	9.4	35.4	11.44	330	0.00	41.62	44.03	1.20	5135
F+10	36.9	93.8	0.44	0.30	20.56	1.47	10.1	57.7	12.45	402	0.00	63.33	68.37	1.11	6051
F+10	36.3	109.7	0.44	0.30	20.19	1.45	10.1	66.3	12.28	394	0.00	72.70	79.60	1.10	5972
Rill 3	slope = 8.95 %														
R+0	4.2	52.7	0.22	0.15	4.62	0.55	7.5	3.7	4.82	72	4.37	1.12	0.00	1.66	1152
R+0	5.0	54.3	0.22	0.15	5.49	0.55	7.5	4.5	4.82	72	4.37	2.36	0.00	1.66	1152
R+2	12.7	48.7	0.34	0.23	9.00	0.91	7.8	10.3	7.97	159	4.17	10.45	11.97	1.16	2928
R+2	12.4	54.7	0.34	0.23	8.81	0.90	7.8	11.3	7.88	156	4.17	11.91	13.10	1.15	2896
R+4	19.7	73.1	0.39	0.27	12.10	1.07	10.0	24.0	9.37	259	3.07	23.58	24.84	1.02	3985
R+4	19.8	69.0	0.39	0.27	12.14	1.07	10.0	22.7	9.37	259	3.07	22.19	23.49	1.02	3985
R+6	29.4	72.0	0.45	0.31	15.68	1.28	11.1	35.3	11.21	375	2.69	32.75	34.63	0.92	5489
R+6	30.8	76.9	0.45	0.31	16.44	1.32	11.1	39.5	11.56	393	2.69	36.97	39.04	0.95	5660
R+8	36.2	63.6	0.48	0.33	18.43	1.40	11.6	38.4	12.26	449	2.54	34.33	36.38	0.92	6294
R+8	36.8	77.7	0.48	0.33	18.72	1.42	11.6	47.6	12.44	458	2.54	43.22	45.65	0.93	6384
R+10	44.5	103.7	0.49	0.34	21.92	1.59	12.4	76.8	13.93	582	2.31	66.64	70.80	0.98	7383
R+10	44.4	80.7	0.49	0.34	21.86	1.58	12.4	59.7	13.84	576	2.31	51.24	54.14	0.97	7337
F+2	7.1	16.7	0.25	0.17	6.88	0.75	7.5	2.0	6.54	113	0.00	2.93	2.96	1.77	1764
F+2	6.9	28.3	0.25	0.17	6.72	0.73	7.5	3.3	6.41	110	0.00	4.85	4.92	1.73	1730
F+4	13.8	73.5	0.35	0.24	9.64	0.93	8.1	16.9	8.15	171	0.00	23.16	24.39	1.14	3055
F+4	14.4	58.0	0.35	0.24	10.02	0.96	8.1	13.9	8.40	179	0.00	19.01	19.79	1.18	3148
F+6	23.6	57.1	0.40	0.28	14.25	1.19	8.9	22.5	10.45	273	0.00	27.92	29.14	1.10	4522
F+6	24.1	52.5	0.40	0.28	14.52	1.21	8.9	21.0	10.59	279	0.00	26.15	27.20	1.11	4586
F+8	31.1	76.1	0.42	0.29	18.17	1.41	9.1	39.5	12.34	358	0.00	48.09	50.96	1.21	5526
F+8	33.5	73.4	0.42	0.29	19.57	1.48	9.1	41.0	12.99	386	0.00	49.95	52.80	1.28	5818
F+10	42.8	94.2	0.47	0.32	22.10	1.57	9.9	67.2	13.71	453	0.00	75.52	81.73	1.06	6934
F+10	41.3	65.2	0.47	0.32	21.36	1.53	9.9	44.9	13.39	437	0.00	50.47	53.25	1.03	6770

RILL DATA ANALYSIS SOIL: MANOR DATE: JUNE 17, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 8.64 %														
R+2	11.5	92.3	0.35	0.24	8.07	0.75	8.0	17.7	6.34	115	4.05	20.52	21.68	0.90	2445
R+2	11.5	59.6	0.35	0.24	8.07	0.75	8.0	11.4	6.34	115	4.05	11.81	13.66	0.90	2445
R+4	19.1	75.1	0.42	0.29	11.12	0.92	9.1	23.9	7.78	178	3.47	25.87	27.72	0.76	3621
R+4	18.3	70.7	0.42	0.29	10.64	0.89	9.1	21.6	7.52	169	3.47	22.99	24.74	0.73	3503
R+6	24.0	71.9	0.45	0.31	12.79	0.99	10.9	28.7	8.37	239	2.73	26.42	28.35	0.69	4245
R+6	25.5	94.6	0.45	0.31	13.59	1.04	10.9	40.2	8.79	258	2.73	38.05	40.65	0.72	4460
R+8	30.8	77.6	0.48	0.33	15.73	1.28	11.8	39.8	10.82	378	2.48	35.18	37.57	0.81	5737
R+8	32.6	109.4	0.48	0.33	16.62	1.33	11.8	59.4	11.25	401	2.48	53.66	57.45	0.85	5961
R+10	38.9	77.1	0.49	0.33	19.43	1.47	12.2	49.9	12.43	483	2.36	43.16	45.90	0.90	6732
R+10	40.8	90.0	0.49	0.33	20.41	1.52	12.2	61.3	12.85	508	2.36	53.48	56.93	0.93	6961
F+2	5.6	28.6	0.24	0.17	5.55	0.62	7.6	2.7	5.21	82	0.00	3.88	0.00	1.48	1421
F+2	5.7	32.0	0.24	0.17	5.67	0.63	7.6	3.1	5.31	84	0.00	4.44	0.00	1.51	1449
F+4	14.4	49.9	0.32	0.22	10.91	1.01	8.3	12.0	8.55	188	0.00	15.99	16.52	1.42	3050
F+4	14.2	57.3	0.32	0.22	10.80	1.00	8.3	13.6	8.49	186	0.00	18.16	18.86	1.41	3027
F+6	18.9	73.8	0.35	0.24	13.15	1.13	8.8	23.3	9.56	235	0.00	29.34	30.89	1.34	3722
F+6	20.5	70.9	0.35	0.24	14.25	1.20	8.8	24.2	10.15	258	0.00	30.52	32.04	1.42	3952
F+8	28.8	76.0	0.39	0.27	17.88	1.35	9.8	36.5	11.41	342	0.00	41.29	43.66	1.27	4969
F+8	27.5	89.0	0.39	0.27	17.10	1.31	9.8	40.8	11.04	325	0.00	46.24	49.41	1.23	4808
F+10	37.1	90.6	0.43	0.30	20.85	1.48	10.3	56.0	12.47	411	0.00	60.32	64.85	1.14	6003
F+10	37.1	80.9	0.43	0.30	20.84	1.47	10.3	49.9	12.47	410	0.00	53.81	57.38	1.14	6002
Rill 5	slope = 7.93 %														
R+2	11.7	62.6	0.36	0.25	7.94	0.91	7.9	12.2	7.06	134	4.12	13.10	12.85	0.94	3072
R+2	11.8	49.7	0.36	0.25	8.02	0.91	7.9	9.8	7.06	134	4.12	9.71	10.25	0.94	3072
R+4	19.2	54.1	0.42	0.29	10.94	1.01	10.0	17.3	7.84	198	3.07	16.14	16.74	0.74	4049
R+4	18.4	60.8	0.42	0.29	10.51	0.99	10.0	18.6	7.68	192	3.07	17.65	17.92	0.72	3969
R+6	26.4	44.3	0.45	0.31	14.39	1.27	10.6	19.5	9.85	297	2.84	17.57	19.22	0.84	5337
R+6	25.9	57.0	0.45	0.31	14.10	1.26	10.6	24.6	9.78	294	2.84	22.85	24.36	0.84	5295
R+8	33.4	64.2	0.46	0.32	17.61	1.32	11.6	35.7	10.24	343	2.54	31.80	33.50	0.82	5730
R+8	33.6	70.0	0.46	0.32	17.74	1.32	11.6	39.2	10.24	343	2.54	35.18	36.99	0.82	5730
R+10	41.8	91.8	0.45	0.31	22.62	1.57	12.4	64.0	12.18	476	2.31	55.13	58.51	1.03	6642
R+10	42.1	61.2	0.45	0.31	22.79	1.58	12.4	43.0	12.26	480	2.31	36.24	38.39	1.04	6684

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 7.93 %														
F+2	6.3	23.3	0.24	0.17	6.27	0.73	6.9	2.4	5.66	84	0.00	3.94	4.00	1.62	1675
F+2	6.1	21.2	0.24	0.17	6.12	0.72	6.9	2.2	5.55	81	0.00	3.50	3.55	1.59	1643
F+4	12.2	49.5	0.32	0.22	9.27	0.92	7.8	10.1	7.16	135	0.00	14.36	14.92	1.19	2788
F+4	14.1	41.8	0.32	0.22	10.66	1.03	7.8	9.8	7.97	159	0.00	13.97	14.42	1.32	3103
F+6	21.7	65.7	0.38	0.26	13.79	1.18	8.6	23.7	9.18	217	0.00	30.55	32.35	1.07	4260
F+6	21.4	69.1	0.38	0.26	13.60	1.17	8.6	24.6	9.09	214	0.00	31.73	33.71	1.06	4217
F+8	30.8	72.5	0.42	0.29	17.77	1.39	9.1	37.2	10.79	290	0.00	45.61	48.80	1.04	5514
F+8	28.9	77.7	0.42	0.29	16.67	1.33	9.1	37.4	10.31	271	0.00	45.84	49.32	0.99	5269
F+10	37.8	75.6	0.44	0.30	20.74	1.49	10.0	47.6	11.56	355	0.00	52.93	56.84	1.00	6213
F+10	36.4	64.7	0.44	0.30	19.96	1.45	10.0	39.2	11.25	341	0.00	43.61	46.33	0.98	6046
Rill 6	slope = 8.68 %														
R+0	3.7	62.9	0.21	0.15	4.15	0.54	6.6	3.8	4.58	58	5.12	1.37	2.53	1.70	1089
R+2	10.6	76.2	0.36	0.25	7.20	0.78	7.8	13.5	6.62	119	4.21	15.19	15.18	0.87	2639
R+2	11.0	58.9	0.36	0.25	7.46	0.80	7.8	10.8	6.79	124	4.21	11.33	12.22	0.90	2707
R+4	19.4	73.0	0.41	0.28	11.39	1.09	9.4	23.7	9.25	239	3.33	24.70	25.84	0.92	4258
R+4	19.3	61.7	0.41	0.28	11.30	1.08	9.4	19.8	9.17	235	3.33	20.16	21.45	0.91	4219
R+6	27.6	72.1	0.46	0.31	14.68	1.25	10.5	33.2	10.61	328	2.88	32.29	33.75	0.86	5389
R+6	27.5	63.7	0.46	0.31	14.60	1.25	10.5	29.2	10.61	328	2.88	28.03	29.49	0.86	5389
R+8	32.5	61.9	0.48	0.33	16.37	1.35	11.7	33.5	11.46	410	2.50	29.34	30.90	0.84	6133
R+8	33.3	58.4	0.48	0.33	16.80	1.37	11.7	32.4	11.63	419	2.50	28.32	29.89	0.85	6224
R+10	41.7	58.6	0.52	0.36	19.43	1.39	12.1	40.7	11.80	445	2.38	34.91	36.60	0.74	6830
R+10	40.9	71.1	0.52	0.36	19.05	1.37	12.1	48.4	11.63	435	2.38	41.99	43.92	0.73	6732
F+2	6.5	28.8	0.26	0.18	6.02	0.70	7.1	3.1	5.90	92	0.00	4.90	4.99	1.47	1714
F+2	6.4	23.2	0.26	0.18	5.97	0.69	7.1	2.5	5.86	91	0.00	3.92	3.98	1.46	1703
F+4	14.0	44.5	0.34	0.23	9.95	0.96	8.0	10.4	8.17	169	0.00	14.41	14.87	1.19	3098
F+4	14.4	38.0	0.34	0.23	10.25	0.98	8.0	9.1	8.36	175	0.00	12.68	13.03	1.22	3169
F+6	22.1	53.8	0.39	0.27	13.63	1.17	8.8	19.8	9.90	246	0.00	25.19	26.26	1.08	4333
F+6	22.7	42.4	0.39	0.27	13.95	1.19	8.8	16.0	10.07	253	0.00	20.31	20.99	1.10	4410
F+8	29.8	53.6	0.41	0.28	17.70	1.36	9.5	26.6	11.54	337	0.00	31.13	32.43	1.18	5235
F+8	29.2	54.6	0.41	0.28	17.38	1.34	9.5	26.6	11.39	330	0.00	31.10	32.43	1.16	5166
F+10	35.8	67.0	0.42	0.29	20.56	1.45	10.4	39.9	12.33	408	0.00	42.51	44.73	1.17	5783
F+10	37.0	57.3	0.42	0.29	21.23	1.49	10.4	35.3	12.62	423	0.00	37.57	39.23	1.20	5922

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 92.86 Kinematic Viscosity = 1.11 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 29.2 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.97 %														
R+0	3.9	37.6	0.17	0.12	5.57	0.62	6.3	2.4	5.44	74	3.10	1.25	3.25	3.20	949
R+2	10.9	44.2	0.29	0.20	9.00	0.87	9.4	8.0	7.64	184	1.90	7.61	8.66	1.50	2303
R+2	10.8	44.6	0.29	0.20	8.88	0.86	9.4	8.0	7.55	181	1.90	7.58	8.62	1.49	2277
R+4	18.0	47.3	0.33	0.23	13.14	1.08	11.3	14.2	9.48	305	1.50	12.50	13.39	1.46	3232
R+4	17.1	148.3	0.33	0.23	12.46	1.07	11.3	42.2	9.39	301	1.50	40.17	41.73	1.45	3203
R+6	27.2	82.3	0.39	0.26	17.09	1.17	12.5	37.3	10.27	382	1.31	31.81	32.96	1.17	4064
R+6	27.9	87.1	0.39	0.26	17.55	1.20	12.5	40.5	10.53	397	1.31	34.70	35.99	1.20	4169
R+8	36.2	67.5	0.42	0.29	21.13	1.50	13.1	40.7	13.16	582	1.22	33.21	34.38	1.30	5611
R+8	37.7	54.5	0.42	0.29	22.02	1.54	13.1	34.2	13.52	606	1.22	27.77	28.79	1.33	5761
R+10	41.2	56.2	0.38	0.26	26.28	1.73	13.8	38.6	15.18	755	1.14	30.04	31.09	1.78	5930
R+10	42.6	70.9	0.38	0.26	27.17	1.75	13.8	50.4	15.36	768	1.14	39.57	40.91	1.80	5998
F+2	6.1	3.2	0.18	0.13	8.19	0.60	12.5	0.3	5.23	139	0.00	0.30	0.30	2.68	979
F+2	6.3	3.7	0.18	0.13	8.34	0.61	12.5	0.4	5.33	143	0.00	0.34	0.34	2.73	995
F+4	12.8	18.8	0.26	0.18	12.09	0.84	12.5	4.0	7.41	234	0.00	3.58	3.61	1.90	1958
F+4	13.9	12.3	0.26	0.18	13.11	0.91	12.5	2.8	7.96	260	0.00	2.53	2.54	2.04	2102
F+6	23.5	23.2	0.31	0.21	18.53	1.07	15.0	9.1	9.39	401	0.00	6.72	6.80	1.69	2963
F+6	23.9	19.5	0.31	0.21	18.89	1.09	15.0	7.8	9.55	411	0.00	5.75	5.81	1.72	3013
F+8	32.2	27.1	0.35	0.24	22.37	1.26	15.0	14.6	11.03	510	0.00	10.79	10.94	1.53	3960
F+8	30.9	23.8	0.35	0.24	21.45	1.21	15.0	12.2	10.65	484	0.00	9.07	9.18	1.48	3821
F+10	38.0	21.1	0.35	0.24	26.56	1.31	17.5	13.4	11.46	630	0.00	8.50	8.59	1.61	4084
F+10	36.9	14.3	0.35	0.24	25.77	1.27	17.5	8.8	11.16	606	0.00	5.59	5.63	1.57	3979
Rill 2	slope = 8.77 %														
R+0	3.5	36.7	0.17	0.12	4.98	0.62	6.3	2.1	5.32	71	3.10	0.66	0.00	3.19	940
R+2	11.1	45.2	0.32	0.22	8.52	0.86	8.8	8.4	7.38	163	2.07	8.54	8.84	1.26	2444
R+2	10.7	46.0	0.32	0.22	8.22	0.83	8.8	8.2	7.12	154	2.07	8.34	8.41	1.22	2359
R+4	17.2	64.9	0.34	0.23	12.34	1.10	11.3	18.6	9.44	303	1.50	16.82	17.53	1.41	3344
R+4	20.7	89.2	0.34	0.23	14.85	1.23	11.3	30.7	10.55	358	1.50	28.82	29.84	1.57	3739
R+6	26.6	67.1	0.39	0.27	16.42	1.32	13.1	29.7	11.33	465	1.22	23.95	24.94	1.25	4670
R+6	27.3	66.2	0.39	0.27	16.89	1.34	13.1	30.2	11.50	475	1.22	24.32	25.32	1.27	4740
R+8	34.3	71.3	0.41	0.28	20.46	1.43	13.1	40.7	12.27	524	1.22	33.27	34.62	1.26	5240
R+8	35.9	75.0	0.41	0.28	21.39	1.46	13.1	44.8	12.53	540	1.22	36.74	38.25	1.29	5350
R+10	44.4	71.6	0.42	0.29	25.75	1.63	13.1	53.0	13.99	637	1.22	43.61	45.45	1.36	6140
R+10	40.8	65.2	0.42	0.29	23.64	1.54	13.1	44.3	13.21	585	1.22	36.29	37.78	1.28	5801

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 8.77 %														
F+2	6.9	6.4	0.18	0.12	9.19	0.66	12.5	0.7	5.68	157	0.00	0.65	0.00	2.93	1082
F+2	7.2	7.5	0.18	0.12	9.61	0.69	12.5	0.9	5.92	167	0.00	0.80	0.00	3.05	1127
F+4	14.7	18.1	0.26	0.18	13.93	0.95	12.5	4.4	8.19	272	0.00	3.95	3.98	2.12	2205
F+4	15.9	12.8	0.26	0.18	15.07	1.02	12.5	3.4	8.76	301	0.00	3.01	3.03	2.27	2357
F+6	23.1	12.4	0.30	0.21	18.70	1.11	14.4	4.8	9.54	393	0.00	3.67	3.69	1.81	2997
F+6	23.1	13.4	0.30	0.21	18.74	1.11	14.4	5.2	9.56	395	0.00	4.00	4.03	1.82	3003
F+8	30.6	19.1	0.34	0.23	21.77	1.23	15.0	9.8	10.54	477	0.00	7.23	7.30	1.54	3775
F+8	31.5	16.2	0.34	0.23	22.40	1.26	15.0	8.5	10.80	494	0.00	6.31	6.37	1.58	3867
F+10	37.5	27.0	0.36	0.25	25.39	1.36	15.6	16.9	11.66	578	0.00	11.99	12.17	1.54	4390
F+10	37.7	23.0	0.36	0.25	25.49	1.36	15.6	14.4	11.70	581	0.00	10.25	10.38	1.55	4404
Rill 3	slope = 9.08 %														
R+0	3.9	39.9	0.18	0.12	5.35	0.62	6.3	2.6	5.51	75	3.10	1.52	2.48	2.99	989
R+2	10.8	48.4	0.31	0.21	8.44	0.85	8.1	8.7	7.55	157	2.27	9.68	10.12	1.32	2388
R+2	10.9	48.9	0.31	0.21	8.49	0.86	8.1	8.9	7.64	159	2.27	9.90	10.36	1.33	2416
R+4	19.2	61.4	0.34	0.23	13.71	1.12	12.5	19.6	9.95	364	1.31	16.13	16.77	1.47	3426
R+4	20.2	62.1	0.34	0.23	14.41	1.15	12.5	20.9	10.22	379	1.31	17.25	17.91	1.51	3518
R+6	24.5	81.1	0.38	0.26	15.72	1.20	12.5	33.1	10.66	404	1.31	28.08	28.87	1.27	4080
R+6	25.3	76.6	0.38	0.26	16.28	1.23	12.5	32.3	10.93	419	1.31	27.44	28.24	1.30	4182
R+8	33.2	71.9	0.36	0.25	22.06	1.62	12.5	39.8	14.39	634	1.31	34.05	35.17	1.84	5326
R+8	33.8	62.1	0.36	0.25	22.44	1.53	12.5	34.9	13.59	582	1.31	29.74	30.74	1.73	5031
R+10	39.9	63.9	0.39	0.27	25.01	1.59	13.1	42.5	14.12	647	1.22	34.77	35.91	1.60	5545
R+10	39.9	54.2	0.39	0.27	25.00	1.59	13.1	36.1	14.12	647	1.22	29.31	30.31	1.60	5545
F+2	6.7	5.2	0.18	0.12	9.23	0.66	12.5	0.6	5.91	167	0.00	0.51	0.00	3.20	1060
F+2	7.1	3.6	0.18	0.12	9.75	0.70	12.5	0.4	6.21	179	0.00	0.38	0.00	3.37	1114
F+4	14.6	15.7	0.27	0.18	13.22	0.91	12.5	3.8	8.11	268	0.00	3.40	3.43	1.91	2206
F+4	15.3	11.9	0.27	0.18	13.83	0.95	12.5	3.0	8.43	284	0.00	2.70	2.71	1.99	2294
F+6	20.9	15.3	0.30	0.20	16.99	0.99	15.0	5.3	8.81	364	0.00	3.94	3.97	1.68	2666
F+6	21.4	14.0	0.30	0.20	17.38	1.01	15.0	5.0	8.99	375	0.00	3.70	3.72	1.72	2719
F+8	28.7	16.4	0.34	0.23	20.78	1.18	15.0	7.8	10.49	473	0.00	5.81	5.86	1.58	3570
F+8	28.9	14.5	0.34	0.23	20.91	1.19	15.0	7.0	10.54	477	0.00	5.16	5.20	1.59	3589
F+10	34.5	34.7	0.38	0.26	22.28	1.25	15.0	19.9	11.12	517	0.00	14.75	15.05	1.34	4236
F+10	33.4	42.2	0.38	0.26	21.59	1.22	15.0	23.5	10.84	497	0.00	17.41	17.83	1.31	4127

RILL DATA ANALYSIS SOIL: CARIBOU DATE: JUNE 29, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 9.02 %														
R+0	3.4	41.3	0.16	0.11	5.11	0.65	6.3	2.4	5.74	80	3.10	1.13	2.18	3.65	958
R+2	10.5	56.4	0.31	0.21	8.30	0.80	8.1	9.8	7.06	142	2.27	11.20	11.26	1.28	2209
R+2	10.4	45.8	0.31	0.21	8.27	0.79	8.1	8.0	6.98	139	2.27	8.64	8.99	1.26	2181
R+4	18.9	76.6	0.34	0.23	13.49	1.09	12.5	24.2	9.62	347	1.31	20.18	21.00	1.41	3342
R+4	19.4	56.2	0.34	0.23	13.81	1.11	12.5	18.2	9.80	356	1.31	14.83	15.66	1.44	3403
R+6	8.7	86.7	0.38	0.26	5.61	0.60	12.5	12.6	5.30	142	1.31	9.88	5.18	0.63	2036
R+6	27.6	76.2	0.38	0.26	17.78	1.28	12.5	35.1	11.30	441	1.31	29.86	31.09	1.35	4343
R+8	35.8	58.1	0.38	0.26	22.57	1.42	12.5	34.7	12.54	515	1.31	29.54	30.80	1.44	4923
R+8	35.9	87.5	0.38	0.26	22.61	1.43	12.5	52.3	12.63	521	1.31	45.19	47.25	1.45	4958
R+10	44.5	89.9	0.37	0.26	28.88	1.69	13.8	66.7	14.92	736	1.14	52.74	55.12	1.82	5688
R+10	43.2	70.1	0.37	0.26	28.03	1.66	13.8	50.5	14.66	716	1.14	39.64	41.25	1.78	5587
F+2	6.5	5.4	0.18	0.12	8.70	0.63	12.5	0.6	5.57	152	0.00	0.52	0.52	2.90	1025
F+2	6.9	4.3	0.18	0.12	9.33	0.67	12.5	0.5	5.93	168	0.00	0.44	0.44	3.09	1092
F+4	14.7	15.8	0.25	0.18	14.02	0.96	12.5	3.9	8.48	287	0.00	3.44	3.47	2.22	2206
F+4	15.4	12.3	0.25	0.18	14.63	1.00	12.5	3.2	8.79	303	0.00	2.81	2.82	2.30	2287
F+6	24.0	17.7	0.30	0.21	19.32	1.18	13.8	7.1	10.41	429	0.00	5.70	5.75	1.95	3198
F+6	24.4	10.1	0.30	0.21	19.66	1.20	13.8	4.1	10.56	438	0.00	3.30	3.32	1.98	3244
F+8	31.1	18.5	0.34	0.23	22.49	1.34	13.8	9.6	11.80	518	0.00	7.73	7.80	1.79	4037
F+8	32.9	18.9	0.34	0.23	23.82	1.40	13.8	10.4	12.37	555	0.00	8.37	8.45	1.87	4230
F+10	39.3	14.2	0.34	0.24	27.72	1.50	15.0	9.3	13.25	672	0.00	6.87	6.92	1.90	4648
F+10	38.4	15.3	0.34	0.24	27.12	1.47	15.0	9.8	13.02	654	0.00	7.25	7.31	1.87	4567
Rill 5	slope = 8.48 %														
R+2	10.5	59.1	0.33	0.23	7.70	0.78	7.5	10.3	6.47	115	2.50	12.83	13.03	1.00	2326
R+2	10.5	58.9	0.33	0.23	7.73	0.78	7.5	10.3	6.47	115	2.50	12.82	13.02	1.00	2326
R+4	18.9	74.7	0.37	0.25	12.40	1.11	12.5	23.6	9.21	324	1.31	19.65	20.49	1.14	3704
R+4	19.1	61.3	0.37	0.25	12.52	1.11	12.5	19.5	9.21	324	1.31	16.05	16.87	1.14	3704
R+6	25.3	68.2	0.39	0.27	15.60	1.30	12.5	28.8	10.78	411	1.31	24.28	25.31	1.18	4614
R+6	24.8	76.7	0.39	0.27	15.26	1.28	12.5	31.7	10.62	402	1.31	26.86	27.96	1.16	4543
R+8	32.7	77.9	0.40	0.27	19.94	1.41	12.5	42.4	11.70	464	1.31	36.41	37.91	1.26	5051
R+8	33.4	62.1	0.40	0.27	20.37	1.43	12.5	34.6	11.86	474	1.31	29.42	30.62	1.27	5122
R+10	39.5	75.0	0.39	0.27	24.32	1.61	13.1	49.3	13.35	595	1.22	40.52	42.17	1.46	5710
R+10	40.9	62.7	0.39	0.27	25.22	1.65	13.1	42.8	13.69	617	1.22	35.00	36.38	1.50	5852

RILL DATA ANALYSIS SOIL: CARIBOU DATE: JUNE 29, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 8.48 %														
F+2	6.2	6.4	0.18	0.12	8.23	0.60	12.5	0.7	4.97	129	0.00	0.59	0.59	2.57	980
F+2	6.4	7.4	0.18	0.12	8.56	0.62	12.5	0.8	5.15	136	0.00	0.70	0.70	2.66	1015
F+4	14.0	27.6	0.26	0.18	13.14	0.91	12.5	6.4	7.53	240	0.00	5.73	5.80	1.91	2119
F+4	14.6	21.7	0.26	0.18	13.69	0.94	12.5	5.3	7.80	253	0.00	4.70	4.75	1.98	2196
F+6	21.6	31.3	0.31	0.21	16.97	1.09	13.1	11.3	9.05	332	0.00	9.55	9.72	1.61	3042
F+6	22.2	18.7	0.31	0.21	17.42	1.12	13.1	6.9	9.25	343	0.00	5.87	5.93	1.64	3110
F+8	28.2	18.3	0.33	0.23	20.63	1.28	13.1	8.6	10.64	423	0.00	7.29	7.36	1.65	3828
F+8	29.3	21.0	0.33	0.23	21.44	1.32	13.1	10.2	10.98	443	0.00	8.67	8.78	1.70	3949
F+10	33.6	21.9	0.37	0.26	21.90	1.31	13.8	12.3	10.85	456	0.00	9.91	10.05	1.33	4384
F+10	33.8	29.0	0.37	0.26	22.06	1.32	13.8	16.3	10.91	460	0.00	13.20	13.44	1.34	4409
Rill 6	slope = 8.75 %														
R+2	10.4	47.3	0.31	0.21	8.10	0.81	8.1	8.2	6.94	138	2.27	8.90	8.79	1.22	2264
R+2	10.1	46.6	0.31	0.21	7.87	0.79	8.1	7.8	6.76	133	2.27	8.41	8.15	1.19	2208
R+4	18.4	71.2	0.35	0.24	12.78	1.14	11.9	21.9	9.76	336	1.40	19.07	19.89	1.35	3597
R+4	18.9	56.0	0.35	0.24	13.09	1.16	11.9	17.6	9.93	345	1.40	15.10	15.96	1.38	3660
R+6	23.9	92.6	0.39	0.27	14.86	1.27	12.5	36.9	10.87	416	1.31	31.46	32.73	1.21	4464
R+6	23.7	64.6	0.39	0.27	14.73	1.26	12.5	25.5	10.79	411	1.31	21.38	22.34	1.20	4428
R+8	34.4	98.3	0.40	0.27	20.97	1.45	12.5	56.4	12.41	508	1.31	48.86	51.24	1.33	5204
R+8	33.6	73.4	0.40	0.27	20.44	1.42	12.5	41.1	12.16	492	1.31	35.21	36.71	1.30	5097
R+10	41.4	71.4	0.40	0.28	25.05	1.65	13.1	49.3	14.13	647	1.22	40.56	42.28	1.49	5966
R+10	40.7	69.8	0.40	0.28	24.58	1.63	13.1	47.3	13.96	635	1.22	38.81	40.45	1.47	5894
F+2	6.5	8.7	0.20	0.14	7.91	0.58	12.5	0.9	4.95	128	0.00	0.84	0.00	2.14	1033
F+2	6.5	5.9	0.20	0.14	7.93	0.58	12.5	0.6	4.96	128	0.00	0.56	0.00	2.14	1036
F+4	14.1	17.5	0.28	0.19	12.23	0.85	12.5	4.1	7.31	229	0.00	3.64	3.68	1.59	2147
F+4	14.8	15.8	0.28	0.19	12.82	0.89	12.5	3.9	7.61	244	0.00	3.45	3.48	1.66	2236
F+6	21.3	17.3	0.33	0.22	15.88	1.03	13.1	6.1	8.83	320	0.00	5.20	5.25	1.41	3029
F+6	22.1	13.6	0.33	0.22	16.48	1.06	13.1	5.0	9.11	335	0.00	4.26	4.29	1.46	3126
F+8	29.3	22.3	0.37	0.26	19.08	1.20	13.1	10.9	10.30	403	0.00	9.22	9.35	1.27	4033
F+8	30.7	21.9	0.37	0.26	20.01	1.25	13.1	11.2	10.71	427	0.00	9.49	9.62	1.32	4193
F+10	36.1	26.1	0.37	0.25	23.89	1.44	13.1	15.7	12.36	530	0.00	13.29	13.49	1.56	4772
F+10	34.9	35.9	0.37	0.25	23.07	1.40	13.1	20.9	12.02	508	0.00	17.67	18.04	1.52	4642

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 84.58 Kinematic Viscosity = 1.03 x 10^{-6} m^2/s

Velocity Factor = 0.687 D_i = 59.33 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.18 %														
R+0	3.9	84.6	0.24	0.16	3.96	0.64	5.4	5.5	5.13	53	7.47	3.84	0.00	1.54	1477
R+2	12.5	95.3	0.41	0.28	7.48	0.88	6.9	19.9	7.05	109	5.63	26.51	29.50	0.73	3471
R+2	12.8	95.8	0.41	0.28	7.63	0.89	6.9	20.4	7.13	111	5.63	27.31	30.62	0.73	3510
R+4	20.3	103.5	0.45	0.31	10.91	1.12	6.3	34.9	8.97	142	6.29	55.84	65.70	0.75	4898
R+4	18.6	113.2	0.45	0.31	10.00	1.06	6.3	35.1	8.49	131	6.29	56.03	65.76	0.71	4636
R+6	26.7	146.3	0.43	0.30	15.08	1.30	7.0	65.1	10.41	199	5.51	97.79	118.74	0.96	5421
R+6	24.5	146.1	0.43	0.30	13.85	1.26	7.0	59.7	10.09	190	5.51	89.25	107.61	0.93	5254
R+8	27.2	185.3	0.42	0.29	15.60	1.40	7.5	84.1	11.21	238	5.08	119.55	147.42	1.06	5755
R+8	35.8	188.6	0.42	0.29	20.49	1.66	7.5	112.4	13.29	307	5.08	161.45	201.04	1.26	6824
R+10	41.7	193.8	0.48	0.33	21.07	1.69	7.9	134.7	13.54	332	4.79	185.24	236.86	1.00	7876
R+10	43.9	183.2	0.48	0.33	22.18	1.75	7.9	134.0	14.02	349	4.79	184.32	232.24	1.03	8155
F+2	7.9	103.4	0.32	0.22	6.05	0.70	7.0	13.7	5.62	79	0.00	21.68	23.80	0.95	2164
F+2	7.9	104.1	0.32	0.22	6.03	0.70	7.0	13.7	5.60	78	0.00	21.73	23.88	0.94	2157
F+4	15.6	124.8	0.40	0.28	9.42	0.87	8.9	32.4	6.94	137	0.00	40.57	46.29	0.73	3375
F+4	15.9	97.0	0.40	0.28	9.59	0.88	8.9	25.6	7.04	140	0.00	32.11	35.46	0.74	3426
F+6	23.1	100.7	0.41	0.28	13.54	1.19	8.3	38.8	9.55	206	0.00	52.25	57.89	0.95	4795
F+6	24.2	93.4	0.41	0.28	14.16	1.23	8.3	37.6	9.87	216	0.00	50.69	55.69	0.98	4952
F+8	30.9	125.6	0.47	0.32	15.93	1.28	9.1	64.7	10.27	254	0.00	78.81	90.97	0.79	5862
F+8	31.3	118.7	0.47	0.32	16.11	1.29	9.1	61.9	10.35	257	0.00	75.31	86.15	0.79	5911
F+10	34.1	115.5	0.46	0.32	17.99	1.39	9.3	65.7	11.15	291	0.00	78.93	89.45	0.89	6217
F+10	48.1	82.2	0.46	0.32	25.35	1.75	9.3	65.8	14.03	411	0.00	79.07	86.17	1.13	7826
Rill 2	slope = 8.31 %														
R+2	10.9	44.1	0.44	0.31	5.94	0.79	7.0	8.0	6.43	96	5.51	7.21	0.00	0.55	3411
R+2	12.1	53.9	0.44	0.31	6.61	0.85	7.0	10.9	6.91	108	5.51	11.75	0.00	0.59	3670
R+4	18.5	75.2	0.51	0.35	8.90	1.02	7.1	23.2	8.30	144	5.39	30.85	34.87	0.55	5006
R+4	18.4	72.6	0.51	0.35	8.84	1.02	7.1	22.3	8.30	144	5.39	29.35	33.32	0.55	5006
R+6	24.0	105.0	0.46	0.31	12.76	1.22	7.4	42.0	9.92	195	5.18	58.04	67.22	0.81	5400
R+6	24.5	93.9	0.46	0.31	13.02	1.23	7.4	38.3	10.00	197	5.18	52.56	60.75	0.82	5445
R+8	28.6	167.3	0.46	0.32	14.98	1.25	7.6	79.8	10.17	209	4.98	111.35	138.33	0.80	5627
R+8	34.0	161.1	0.46	0.32	17.80	1.32	7.6	91.4	10.74	227	4.98	128.19	162.12	0.85	5942
R+10	43.5	141.3	0.50	0.34	21.16	1.47	8.1	102.5	11.96	284	4.61	135.54	168.03	0.82	7124
R+10	42.6	144.3	0.50	0.34	20.69	1.45	8.1	102.4	11.79	278	4.61	135.38	168.47	0.80	7027

RILL DATA ANALYSIS SOIL: COLLAMER DATE: JULY 2, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 2	slope = 8.31 %														
F+2	7.6	90.1	0.29	0.20	6.38	0.69	7.6	11.4	5.64	86	0.00	16.56	17.75	1.16	1939
F+2	8.2	81.9	0.29	0.20	6.94	0.74	7.6	11.2	6.05	96	0.00	16.37	17.41	1.24	2078
F+4	15.8	90.4	0.38	0.26	10.16	0.93	8.8	23.8	7.56	154	0.00	30.22	32.84	0.90	3402
F+4	15.4	94.5	0.38	0.26	9.93	0.91	8.8	24.3	7.42	150	0.00	30.88	33.70	0.89	3341
F+6	21.4	92.6	0.38	0.26	13.54	1.17	8.6	33.1	9.50	214	0.00	42.62	46.31	1.09	4359
F+6	21.4	101.5	0.38	0.26	13.51	1.17	8.6	36.2	9.49	213	0.00	46.65	51.13	1.09	4353
F+8	32.6	95.4	0.46	0.32	17.15	1.36	9.0	51.9	11.06	280	0.00	64.11	70.91	0.88	6100
F+8	34.2	89.0	0.46	0.32	17.96	1.41	9.0	50.7	11.43	294	0.00	62.60	68.70	0.91	6302
F+10	36.0	135.0	0.45	0.31	19.43	1.50	8.8	81.1	12.19	315	0.00	102.94	119.02	1.02	6545
F+10	37.7	129.8	0.45	0.31	20.35	1.55	8.8	81.6	12.57	330	0.00	103.66	119.09	1.06	6749
Rill 3	slope = 8.57 %														
R+0	3.6	70.9	0.23	0.16	3.91	0.65	4.9	4.3	5.45	52	8.34	1.47	0.00	1.81	1426
R+2	11.5	52.1	0.42	0.29	6.63	0.88	6.1	10.0	7.38	104	6.44	11.66	14.80	0.71	3592
R+2	11.9	54.0	0.42	0.29	6.87	0.89	6.1	10.7	7.46	106	6.44	13.00	16.12	0.72	3633
R+4	19.0	98.0	0.47	0.33	9.70	1.00	6.6	31.0	8.38	136	5.88	46.13	50.33	0.63	4609
R+4	18.1	76.9	0.47	0.33	9.24	0.98	6.6	23.2	8.22	132	5.88	33.02	36.29	0.62	4516
R+6	27.3	81.5	0.48	0.33	13.70	1.23	7.0	37.1	10.31	196	5.51	53.34	59.81	0.75	5774
R+6	28.5	90.6	0.48	0.33	14.31	1.26	7.0	43.1	10.56	203	5.51	62.83	70.64	0.77	5914
R+8	36.0	114.6	0.45	0.31	19.54	1.46	7.4	68.9	12.24	267	5.18	98.56	112.92	1.04	6342
R+8	36.6	104.4	0.45	0.31	19.83	1.47	7.4	63.6	12.32	270	5.18	90.64	103.01	1.05	6386
R+10	40.9	125.2	0.42	0.29	23.73	1.65	7.9	85.4	13.83	343	4.79	115.67	132.45	1.34	6703
R+10	41.8	94.6	0.42	0.29	24.23	1.67	7.9	65.9	14.00	349	4.79	88.22	98.80	1.36	6784
F+2	7.4	17.9	0.23	0.16	7.76	0.86	6.9	2.2	7.23	113	0.00	3.55	3.59	2.31	1928
F+2	7.1	16.9	0.23	0.16	7.43	0.83	6.9	2.0	6.99	107	0.00	3.22	3.25	2.24	1864
F+4	14.2	69.0	0.33	0.23	10.51	1.01	7.9	16.3	8.48	164	0.00	23.04	24.27	1.34	3218
F+4	14.7	98.9	0.33	0.23	10.87	1.04	7.9	24.2	8.70	171	0.00	34.16	36.84	1.38	3301
F+6	26.2	90.0	0.41	0.28	15.56	1.36	7.5	39.3	11.40	244	0.00	58.28	63.55	1.16	5398
F+6	26.6	100.1	0.41	0.28	15.79	1.37	7.5	44.4	11.51	248	0.00	65.78	72.49	1.17	5450
F+8	32.7	96.5	0.42	0.29	19.05	1.51	8.3	52.6	12.63	313	0.00	70.82	77.52	1.24	6092
F+8	32.5	92.1	0.42	0.29	18.94	1.50	8.3	49.9	12.58	311	0.00	67.15	73.18	1.23	6068
F+10	38.2	86.1	0.43	0.30	21.44	1.59	8.9	54.8	13.35	366	0.00	68.65	74.37	1.21	6687
F+10	13.6	88.9	0.43	0.30	7.63	0.73	8.9	20.2	6.10	113	0.00	25.25	0.00	0.55	3056

RILL DATA ANALYSIS SOIL: COLLAMER DATE: JULY 2, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 8.73 %														
R+2	10.7	58.1	0.44	0.30	5.88	0.70	7.1	10.3	5.98	88	5.39	10.73	7.75	0.52	2992
R+2	11.4	61.5	0.44	0.30	6.27	0.74	7.1	11.7	6.32	96	5.39	12.79	12.61	0.55	3163
R+4	17.5	76.0	0.47	0.32	9.12	0.96	7.2	22.2	8.20	144	5.28	28.78	32.68	0.64	4349
R+4	18.1	103.3	0.47	0.32	9.43	0.98	7.2	31.2	8.37	149	5.28	42.53	47.57	0.65	4439
R+6	23.2	159.0	0.45	0.31	12.59	1.25	7.5	61.4	10.68	221	5.08	85.91	99.68	0.91	5418
R+6	24.5	127.1	0.45	0.31	13.32	1.30	7.5	51.9	11.11	235	5.08	71.86	81.93	0.95	5635
R+8	34.6	140.3	0.46	0.32	18.21	1.58	7.8	80.9	13.50	325	4.88	111.11	128.05	1.08	7069
R+8	33.9	163.6	0.46	0.32	17.85	1.56	7.8	92.4	13.33	319	4.88	127.62	149.91	1.07	6980
R+10	40.8	159.9	0.42	0.29	23.81	1.72	8.3	108.8	14.70	393	4.52	142.04	165.94	1.44	6948
R+10	40.0	143.7	0.42	0.29	23.32	1.72	8.3	95.8	14.70	393	4.52	124.48	143.09	1.44	6948
F+2	7.2	34.7	0.25	0.17	7.07	0.76	7.6	4.1	6.45	106	0.00	6.03	6.15	1.82	1800
F+2	7.5	45.6	0.25	0.17	7.38	0.78	7.6	5.7	6.68	111	0.00	8.28	8.50	1.88	1864
F+4	14.8	107.3	0.35	0.24	10.22	0.97	8.3	26.5	8.25	165	0.00	35.71	38.92	1.13	3300
F+4	14.4	111.4	0.35	0.24	9.95	0.95	8.3	26.8	8.08	160	0.00	36.08	39.48	1.11	3231
F+6	21.7	107.4	0.36	0.25	14.50	1.28	7.9	38.8	10.90	240	0.00	54.75	59.73	1.41	4491
F+6	24.2	103.5	0.36	0.25	16.17	1.37	7.9	41.7	11.74	268	0.00	58.80	63.91	1.52	4835
F+8	31.0	84.3	0.40	0.28	18.59	1.48	8.4	43.5	12.62	317	0.00	57.76	62.12	1.31	5796
F+8	31.4	64.4	0.40	0.28	18.84	1.49	8.4	33.7	12.73	322	0.00	44.74	47.26	1.32	5846
F+10	37.0	81.0	0.40	0.28	22.34	1.65	8.6	49.9	14.08	385	0.00	64.32	68.89	1.49	6421
F+10	37.9	119.6	0.40	0.28	22.94	1.68	8.6	75.6	14.31	395	0.00	97.40	108.12	1.51	6527
Rill 5	slope = 9.10 %														
R+0	3.2	98.6	0.24	0.16	3.28	0.61	5.0	5.3	5.43	54	8.11	3.73	0.00	1.60	1421
R+2	10.7	90.3	0.42	0.29	6.24	0.85	5.5	16.1	7.57	97	7.28	25.30	28.25	0.74	3436
R+2	11.6	92.7	0.42	0.29	6.78	0.90	5.5	18.0	8.01	105	7.28	29.05	33.13	0.79	3638
R+4	18.8	108.8	0.46	0.32	9.87	1.12	6.4	34.1	9.97	170	6.15	53.36	61.14	0.79	5034
R+4	18.8	109.3	0.46	0.32	9.87	1.12	6.4	34.3	9.97	170	6.15	53.68	61.50	0.79	5034
R+6	26.8	170.3	0.44	0.30	14.72	1.31	6.8	76.1	11.66	227	5.75	119.44	143.48	1.02	5615
R+6	25.0	145.1	0.44	0.30	13.76	1.27	6.8	60.6	11.30	217	5.75	93.92	109.86	0.99	5444
R+8	33.4	194.8	0.40	0.28	20.13	1.61	7.2	108.3	14.33	333	5.28	160.74	193.44	1.51	6286
R+8	32.8	134.0	0.40	0.28	19.81	1.59	7.2	73.3	14.15	326	5.28	107.05	122.74	1.49	6208
R+10	40.0	140.0	0.41	0.28	23.40	1.50	7.4	93.4	13.35	304	5.18	135.47	161.19	1.32	6039
R+10	37.5	132.1	0.41	0.28	21.95	1.44	7.4	82.6	12.82	286	5.18	119.26	140.52	1.27	5797

RILL DATA ANALYSIS SOIL: COLLAMER DATE: JULY 2, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 9.10 %														
F+2	8.3	95.1	0.28	0.19	7.10	0.77	7.4	13.1	6.88	113	0.00	19.78	21.04	1.46	2125
F+2	8.2	115.9	0.28	0.19	7.01	0.76	7.4	15.8	6.81	111	0.00	23.79	25.67	1.44	2101
F+4	15.7	107.7	0.32	0.22	11.96	1.10	8.1	28.2	9.76	210	0.00	38.59	41.45	1.63	3397
F+4	14.3	94.3	0.32	0.22	10.90	1.02	8.1	22.5	9.10	189	0.00	30.80	32.79	1.52	3168
F+6	23.6	102.4	0.36	0.25	15.95	1.34	8.3	40.3	11.92	287	0.00	54.29	58.50	1.57	4670
F+6	26.0	130.1	0.36	0.25	17.57	1.43	8.3	56.4	12.72	317	0.00	76.00	83.70	1.67	4985
F+8	32.7	121.9	0.41	0.28	19.37	1.50	8.6	66.5	13.38	357	0.00	85.61	94.73	1.36	5976
F+8	31.1	96.0	0.41	0.28	18.44	1.45	8.6	49.8	12.94	340	0.00	64.15	69.37	1.31	5781
F+10	41.4	85.3	0.41	0.28	24.51	1.73	8.9	58.8	15.43	455	0.00	73.57	78.77	1.57	6888
F+10	38.1	96.2	0.41	0.28	22.56	1.65	8.9	61.1	14.65	421	0.00	76.44	82.58	1.49	6539
Rill 6	slope = 9.19 %														
R+2	8.9	54.5	0.37	0.25	5.86	0.84	6.3	8.1	7.55	110	6.29	8.04	0.00	0.95	2995
R+2	10.7	73.1	0.37	0.25	7.05	0.94	6.3	13.0	8.45	130	6.29	16.80	19.40	1.06	3351
R+4	17.7	98.7	0.43	0.29	10.04	1.14	6.6	29.1	10.25	184	5.88	42.99	49.25	0.95	4737
R+4	18.7	169.7	0.43	0.29	10.58	1.16	6.6	52.8	10.43	189	5.88	82.71	96.07	0.97	4820
R+6	23.3	196.9	0.43	0.30	13.11	1.26	6.5	76.5	11.33	210	6.01	124.83	152.46	1.03	5280
R+6	26.2	144.9	0.43	0.30	14.74	1.34	6.5	63.3	12.05	230	6.01	102.28	120.29	1.10	5616
R+8	32.6	153.7	0.40	0.27	19.79	1.59	7.1	83.4	14.29	326	5.39	124.73	145.77	1.52	6167
R+8	35.0	164.5	0.40	0.27	21.26	1.63	7.1	96.0	14.65	338	5.39	144.27	170.86	1.56	6322
R+10	46.5	179.0	0.42	0.29	26.85	1.62	7.5	138.8	14.56	353	5.08	200.61	253.44	1.40	6613
R+10	42.6	182.0	0.42	0.29	24.56	1.54	7.5	129.1	13.84	327	5.08	186.22	235.12	1.33	6287
F+2	7.6	116.1	0.31	0.21	6.05	0.66	7.8	14.7	5.90	94	0.00	21.14	23.00	1.07	1948
F+2	7.6	110.6	0.31	0.21	6.06	0.66	7.8	14.1	5.91	94	0.00	20.16	21.83	1.07	1950
F+4	16.6	122.8	0.32	0.22	12.46	1.07	9.0	34.0	9.65	228	0.00	41.92	45.38	1.57	3365
F+4	16.1	108.2	0.32	0.22	12.07	1.05	9.0	29.0	9.41	220	0.00	35.76	38.34	1.53	3283
F+6	25.0	133.5	0.41	0.28	14.74	1.25	8.5	55.7	11.25	271	0.00	72.81	81.50	1.13	5007
F+6	26.8	116.5	0.41	0.28	15.79	1.31	8.5	52.1	11.81	292	0.00	68.05	74.96	1.18	5257
F+8	37.3	130.3	0.47	0.32	19.41	1.50	8.8	80.9	13.46	366	0.00	102.76	116.15	1.05	6773
F+8	33.0	96.5	0.47	0.32	17.17	1.38	8.8	53.0	12.38	322	0.00	67.33	73.56	0.97	6229
F+10	39.5	92.1	0.49	0.34	19.58	1.49	9.0	60.6	13.41	374	0.00	74.85	81.67	0.95	7088
F+10	42.3	134.1	0.49	0.34	20.96	1.56	9.0	94.5	14.04	400	0.00	116.61	133.00	1.00	7419

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 93.77 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 26.67 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.53 %														
R+0	3.4	47.8	0.19	0.13	4.42	0.55	7.2	2.7	4.59	66	2.40	1.81	0.00	2.22	1175
R+2	10.8	64.7	0.31	0.21	8.60	0.78	10.0	11.7	6.51	156	1.60	11.35	11.17	1.19	2710
R+2	11.6	48.5	0.31	0.21	9.22	0.83	10.0	9.4	6.93	171	1.60	8.82	9.30	1.27	2884
R+4	18.8	60.8	0.34	0.23	13.38	1.11	11.4	19.0	9.27	300	1.36	17.25	18.24	1.36	4303
R+4	19.5	67.1	0.34	0.23	13.87	1.14	11.4	21.7	9.52	312	1.36	19.93	21.00	1.40	4419
R+6	27.2	85.2	0.37	0.25	17.81	1.37	11.7	38.6	11.44	422	1.31	35.52	37.35	1.41	5783
R+6	28.8	102.7	0.37	0.25	18.86	1.42	11.7	49.3	11.85	446	1.31	45.73	48.29	1.47	5994
R+8	40.1	104.9	0.42	0.29	23.40	1.56	12.8	70.1	13.02	562	1.16	59.86	63.61	1.28	7383
R+8	41.8	74.2	0.42	0.29	24.41	1.61	12.8	51.7	13.44	590	1.16	43.85	46.05	1.32	7619
F+2	8.0	84.2	0.27	0.18	7.20	0.83	6.7	11.2	6.92	113	0.00	18.74	19.73	1.62	2540
F+2	8.4	75.0	0.27	0.18	7.57	0.86	6.7	10.5	7.18	120	0.00	17.55	18.36	1.68	2638
F+4	16.3	72.2	0.32	0.22	12.16	1.13	7.8	19.6	9.44	213	0.00	27.83	29.20	1.52	4178
F+4	16.8	69.6	0.32	0.22	12.53	1.15	7.8	19.4	9.64	219	0.00	27.63	28.93	1.56	4268
F+6	23.6	61.2	0.34	0.23	17.03	1.34	9.3	24.0	11.15	324	0.00	28.76	29.88	1.68	5103
F+6	24.4	55.1	0.34	0.23	17.61	1.37	9.3	22.4	11.42	336	0.00	26.76	27.69	1.72	5228
F+8	32.9	60.8	0.37	0.25	21.70	1.52	10.3	33.3	12.69	436	0.00	35.97	37.42	1.60	6360
F+8	33.3	48.4	0.37	0.25	21.96	1.53	10.3	26.8	12.79	442	0.00	28.95	29.87	1.61	6413
F+10	41.1	94.0	0.37	0.26	26.62	1.64	12.1	64.4	13.69	573	0.00	59.34	62.95	1.66	6998
F+10	37.6	89.4	0.37	0.26	24.37	1.54	12.1	56.0	12.82	519	0.00	51.63	54.63	1.55	6550
Rill 2	slope = 8.35 %														
R+0	3.9	39.1	0.16	0.11	6.01	0.58	9.4	2.5	4.74	91	1.73	1.25	0.00	3.28	1034
R+2	11.2	51.6	0.28	0.19	9.61	0.84	10.0	9.6	6.86	169	1.60	9.07	9.80	1.47	2694
R+2	12.0	36.7	0.28	0.19	10.34	0.81	10.0	7.3	6.62	160	1.60	6.56	7.35	1.42	2598
R+4	18.5	81.3	0.31	0.21	14.60	1.03	10.9	25.0	8.41	249	1.43	24.11	25.30	1.52	3599
R+4	20.3	77.1	0.31	0.21	16.06	1.09	10.9	26.1	8.90	271	1.43	25.22	26.53	1.61	3808
R+6	29.2	85.7	0.38	0.26	18.44	1.21	12.4	41.7	9.89	360	1.21	36.28	38.36	1.14	5290
R+6	30.0	96.9	0.38	0.26	18.94	1.23	12.4	48.4	10.05	369	1.21	42.35	44.99	1.16	5378
R+8	38.7	85.4	0.37	0.25	25.35	1.59	13.4	55.1	12.99	589	1.08	44.58	46.94	1.61	6711
R+8	36.4	90.9	0.37	0.25	23.80	1.52	13.4	55.1	12.42	550	1.08	44.56	47.00	1.54	6416

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r g/s/m^2	D_c - - ->	F	Re
Rill 2	slope = 8.35 %														
F+2	8.0	76.4	0.25	0.17	7.66	0.85	6.9	10.2	6.97	119	0.00	16.40	17.14	1.86	2453
F+2	8.2	39.8	0.25	0.17	7.90	0.87	6.9	5.5	7.14	123	0.00	8.81	9.01	1.90	2512
F+4	15.7	63.3	0.30	0.21	12.51	1.12	8.4	16.5	9.11	217	0.00	21.86	22.73	1.68	3861
F+4	15.7	49.7	0.30	0.21	12.50	1.11	8.4	13.0	9.11	217	0.00	17.13	17.67	1.67	3859
F+6	25.5	68.3	0.34	0.24	17.98	1.41	9.0	29.1	11.49	329	0.00	35.89	37.57	1.64	5520
F+6	25.2	54.1	0.34	0.24	17.75	1.39	9.0	22.7	11.39	324	0.00	28.06	29.09	1.63	5472
F+8	32.7	63.6	0.37	0.25	21.46	1.50	10.4	34.7	12.25	419	0.00	37.03	38.66	1.52	6319
F+8	34.0	70.2	0.37	0.25	22.28	1.54	10.4	39.8	12.59	436	0.00	42.44	44.50	1.56	6493
F+10	37.1	105.4	0.41	0.28	21.79	1.46	11.4	65.2	11.89	436	0.00	63.83	69.14	1.18	6850
F+10	42.2	90.1	0.41	0.28	24.76	1.60	11.4	63.4	13.07	503	0.00	62.02	66.29	1.30	7532
Rill 3	slope = 8.55 %														
R+2	10.9	83.9	0.27	0.19	9.75	0.98	10.6	15.2	8.20	233	1.49	14.44	15.12	1.91	3017
R+2	11.6	61.4	0.27	0.19	10.40	1.02	10.6	11.9	8.53	248	1.49	10.95	11.87	1.98	3140
R+4	18.4	125.5	0.34	0.23	13.29	1.15	11.5	38.4	9.62	321	1.34	35.91	37.92	1.45	4393
R+4	20.9	125.3	0.34	0.23	15.10	1.21	11.5	43.6	10.12	346	1.34	40.88	43.38	1.53	4622
R+6	27.3	90.4	0.36	0.25	18.31	1.34	12.2	41.1	11.21	431	1.23	36.08	38.15	1.46	5516
R+6	31.4	118.1	0.36	0.25	21.05	1.48	12.2	61.7	12.38	500	1.23	54.81	58.47	1.61	6093
R+8	39.9	86.0	0.43	0.30	22.53	1.46	13.1	57.2	12.21	523	1.12	47.52	50.44	1.13	7142
R+8	33.7	100.1	0.43	0.30	19.04	1.27	13.1	56.2	10.62	424	1.12	46.71	49.84	0.98	6212
F+2	9.1	83.7	0.28	0.19	7.97	0.88	6.9	12.7	7.32	129	0.00	20.28	21.35	1.63	2756
F+2	9.2	92.4	0.28	0.19	8.07	0.88	6.9	14.2	7.39	131	0.00	22.68	24.01	1.64	2783
F+4	16.4	90.1	0.32	0.22	12.26	1.10	8.4	24.6	9.22	219	0.00	32.76	34.75	1.49	4075
F+4	17.2	65.6	0.32	0.22	12.86	1.14	8.4	18.8	9.56	231	0.00	25.03	26.11	1.54	4222
F+6	23.8	99.5	0.36	0.25	15.86	1.28	9.1	39.5	10.69	299	0.00	48.10	51.58	1.37	5304
F+6	23.6	106.7	0.36	0.25	15.70	1.27	9.1	41.9	10.62	296	0.00	51.11	55.11	1.36	5267
F+8	34.5	104.6	0.38	0.26	22.25	1.55	10.2	60.2	13.00	447	0.00	65.67	70.53	1.56	6663
F+8	36.0	86.1	0.38	0.26	23.21	1.60	10.2	51.7	13.39	468	0.00	56.40	59.77	1.61	6864
F+10	40.7	53.8	0.39	0.27	25.02	1.58	11.8	36.5	13.23	534	0.00	34.32	35.55	1.44	7112
F+10	38.6	82.3	0.39	0.27	23.72	1.52	11.8	52.9	12.72	503	0.00	49.76	52.58	1.39	6834

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 93.77 Kinematic Viscosity = 0.878 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 26.67 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 8.53 %														
R+0	3.4	47.8	0.19	0.13	4.42	0.55	7.2	2.7	4.59	66	2.40	1.81	0.00	2.22	1175
R+2	10.8	64.7	0.31	0.21	8.60	0.78	10.0	11.7	6.51	156	1.60	11.35	11.17	1.19	2710
R+2	11.6	48.5	0.31	0.21	9.22	0.83	10.0	9.4	6.93	171	1.60	8.82	9.30	1.27	2884
R+4	18.8	60.8	0.34	0.23	13.38	1.11	11.4	19.0	9.27	300	1.36	17.25	18.24	1.36	4303
R+4	19.5	67.1	0.34	0.23	13.87	1.14	11.4	21.7	9.52	312	1.36	19.93	21.00	1.40	4419
R+6	27.2	85.2	0.37	0.25	17.81	1.37	11.7	38.6	11.44	422	1.31	35.52	37.35	1.41	5783
R+6	28.8	102.7	0.37	0.25	18.86	1.42	11.7	49.3	11.85	446	1.31	45.73	48.29	1.47	5994
R+8	40.1	104.9	0.42	0.29	23.40	1.56	12.8	70.1	13.02	562	1.16	59.86	63.61	1.28	7383
R+8	41.8	74.2	0.42	0.29	24.41	1.61	12.8	51.7	13.44	590	1.16	43.85	46.05	1.32	7619
F+2	8.0	84.2	0.27	0.18	7.20	0.83	6.7	11.2	6.92	113	0.00	18.74	19.73	1.62	2540
F+2	8.4	75.0	0.27	0.18	7.57	0.86	6.7	10.5	7.18	120	0.00	17.55	18.36	1.68	2638
F+4	16.3	72.2	0.32	0.22	12.16	1.13	7.8	19.6	9.44	213	0.00	27.83	29.20	1.52	4178
F+4	16.8	69.6	0.32	0.22	12.53	1.15	7.8	19.4	9.64	219	0.00	27.63	28.93	1.56	4268
F+6	23.6	61.2	0.34	0.23	17.03	1.34	9.3	24.0	11.15	324	0.00	28.76	29.88	1.68	5103
F+6	24.4	55.1	0.34	0.23	17.61	1.37	9.3	22.4	11.42	336	0.00	26.76	27.69	1.72	5228
F+8	32.9	60.8	0.37	0.25	21.70	1.52	10.3	33.3	12.69	436	0.00	35.97	37.42	1.60	6360
F+8	33.3	48.4	0.37	0.25	21.96	1.53	10.3	26.8	12.79	442	0.00	28.95	29.87	1.61	6413
F+10	41.1	94.0	0.37	0.26	26.62	1.64	12.1	64.4	13.69	573	0.00	59.34	62.95	1.66	6998
F+10	37.6	89.4	0.37	0.26	24.37	1.54	12.1	56.0	12.82	519	0.00	51.63	54.63	1.55	6550
Rill 2	slope = 8.35 %														
R+0	3.9	39.1	0.16	0.11	6.01	0.58	9.4	2.5	4.74	91	1.73	1.25	0.00	3.28	1034
R+2	11.2	51.6	0.28	0.19	9.61	0.84	10.0	9.6	6.86	169	1.60	9.07	9.80	1.47	2694
R+2	12.0	36.7	0.28	0.19	10.34	0.81	10.0	7.3	6.62	160	1.60	6.56	7.35	1.42	2598
R+4	18.5	81.3	0.31	0.21	14.60	1.03	10.9	25.0	8.41	249	1.43	24.11	25.30	1.52	3599
R+4	20.3	77.1	0.31	0.21	16.06	1.09	10.9	26.1	8.90	271	1.43	25.22	26.53	1.61	3808
R+6	29.2	85.7	0.38	0.26	18.44	1.21	12.4	41.7	9.89	360	1.21	36.28	38.36	1.14	5290
R+6	30.0	96.9	0.38	0.26	18.94	1.23	12.4	48.4	10.05	369	1.21	42.35	44.99	1.16	5378
R+8	38.7	85.4	0.37	0.25	25.35	1.59	13.4	55.1	12.99	589	1.08	44.58	46.94	1.61	6711
R+8	36.4	90.9	0.37	0.25	23.80	1.52	13.4	55.1	12.42	550	1.08	44.56	47.00	1.54	6416

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 8.35 %														
F+2	8.0	76.4	0.25	0.17	7.66	0.85	6.9	10.2	6.97	119	0.00	16.40	17.14	1.86	2453
F+2	8.2	39.8	0.25	0.17	7.90	0.87	6.9	5.5	7.14	123	0.00	8.81	9.01	1.90	2512
F+4	15.7	63.3	0.30	0.21	12.51	1.12	8.4	16.5	9.11	217	0.00	21.86	22.73	1.68	3861
F+4	15.7	49.7	0.30	0.21	12.50	1.11	8.4	13.0	9.11	217	0.00	17.13	17.67	1.67	3859
F+6	25.5	68.3	0.34	0.24	17.98	1.41	9.0	29.1	11.49	329	0.00	35.89	37.57	1.64	5520
F+6	25.2	54.1	0.34	0.24	17.75	1.39	9.0	22.7	11.39	324	0.00	28.06	29.09	1.63	5472
F+8	32.7	63.6	0.37	0.25	21.46	1.50	10.4	34.7	12.25	419	0.00	37.03	38.66	1.52	6319
F+8	34.0	70.2	0.37	0.25	22.28	1.54	10.4	39.8	12.59	436	0.00	42.44	44.50	1.56	6493
F+10	37.1	105.4	0.41	0.28	21.79	1.46	11.4	65.2	11.89	436	0.00	63.83	69.14	1.18	6850
F+10	42.2	90.1	0.41	0.28	24.76	1.60	11.4	63.4	13.07	503	0.00	62.02	66.29	1.30	7532
Rill 3	slope = 8.55 %														
R+2	10.9	83.9	0.27	0.19	9.75	0.98	10.6	15.2	8.20	233	1.49	14.44	15.12	1.91	3017
R+2	11.6	61.4	0.27	0.19	10.40	1.02	10.6	11.9	8.53	248	1.49	10.95	11.87	1.98	3140
R+4	18.4	125.5	0.34	0.23	13.29	1.15	11.5	38.4	9.62	321	1.34	35.91	37.92	1.45	4393
R+4	20.9	125.3	0.34	0.23	15.10	1.21	11.5	43.6	10.12	346	1.34	40.88	43.38	1.53	4622
R+6	27.3	90.4	0.36	0.25	18.31	1.34	12.2	41.1	11.21	431	1.23	36.08	38.15	1.46	5516
R+6	31.4	118.1	0.36	0.25	21.05	1.48	12.2	61.7	12.38	500	1.23	54.81	58.47	1.61	6093
R+8	39.9	86.0	0.43	0.30	22.53	1.46	13.1	57.2	12.21	523	1.12	47.52	50.44	1.13	7142
R+8	33.7	100.1	0.43	0.30	19.04	1.27	13.1	56.2	10.62	424	1.12	46.71	49.84	0.98	6212
F+2	9.1	83.7	0.28	0.19	7.97	0.88	6.9	12.7	7.32	129	0.00	20.28	21.35	1.63	2756
F+2	9.2	92.4	0.28	0.19	8.07	0.88	6.9	14.2	7.39	131	0.00	22.68	24.01	1.64	2783
F+4	16.4	90.1	0.32	0.22	12.26	1.10	8.4	24.6	9.22	219	0.00	32.76	34.75	1.49	4075
F+4	17.2	65.6	0.32	0.22	12.86	1.14	8.4	18.8	9.56	231	0.00	25.03	26.11	1.54	4222
F+6	23.8	99.5	0.36	0.25	15.86	1.28	9.1	39.5	10.69	299	0.00	48.10	51.58	1.37	5304
F+6	23.6	106.7	0.36	0.25	15.70	1.27	9.1	41.9	10.62	296	0.00	51.11	55.11	1.36	5267
F+8	34.5	104.6	0.38	0.26	22.25	1.55	10.2	60.2	13.00	447	0.00	65.67	70.53	1.56	6663
F+8	36.0	86.1	0.38	0.26	23.21	1.60	10.2	51.7	13.39	468	0.00	56.40	59.77	1.61	6864
F+10	40.7	53.8	0.39	0.27	25.02	1.58	11.8	36.5	13.23	534	0.00	34.32	35.55	1.44	7112
F+10	38.6	82.3	0.39	0.27	23.72	1.52	11.8	52.9	12.72	503	0.00	49.76	52.58	1.39	6834

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 4	slope = 8.64 %														
R+0	3.3	70.9	0.17	0.11	4.83	0.49	8.2	3.9	4.14	65	2.04	3.20	0.00	2.58	922
R+2	10.5	83.6	0.29	0.20	8.71	0.73	10.4	14.6	6.17	150	1.52	14.10	15.09	1.23	2432
R+2	12.1	127.2	0.29	0.20	10.03	0.82	10.4	25.6	6.93	178	1.52	25.84	27.79	1.38	2732
R+4	18.8	119.6	0.35	0.24	13.14	1.01	11.2	37.5	8.54	262	1.38	35.92	38.93	1.20	4001
R+4	21.3	128.7	0.35	0.24	14.85	1.11	11.2	45.7	9.38	301	1.38	44.00	47.85	1.32	4397
R+6	29.0	132.5	0.38	0.26	18.47	1.22	12.9	64.1	10.31	402	1.14	53.89	58.78	1.21	5297
R+6	31.4	132.6	0.38	0.26	19.99	1.29	12.9	69.4	10.91	437	1.14	58.48	63.78	1.28	5601
R+8	37.5	133.1	0.36	0.25	25.09	1.23	14.1	83.2	10.40	444	1.00	64.50	71.28	1.34	5082
R+8	40.9	136.0	0.36	0.25	27.32	1.32	14.1	92.6	11.16	494	1.00	71.87	79.47	1.44	5454
F+2	8.5	99.2	0.26	0.18	7.97	0.88	6.8	14.1	7.47	131	0.00	22.94	24.27	1.89	2607
F+2	8.5	93.6	0.26	0.18	8.00	0.89	6.8	13.3	7.49	131	0.00	21.71	22.90	1.90	2614
F+4	14.8	93.3	0.29	0.20	12.60	1.13	8.2	23.1	9.57	229	0.00	31.12	32.80	1.99	3686
F+4	16.4	78.6	0.29	0.20	13.90	1.22	8.2	21.5	10.28	255	0.00	28.93	30.22	2.14	3960
F+6	24.5	82.6	0.33	0.23	18.00	1.41	9.0	33.7	11.90	346	0.00	41.58	43.74	1.86	5285
F+6	24.9	67.8	0.33	0.23	18.36	1.43	9.0	28.2	12.07	354	0.00	34.80	36.27	1.89	5359
F+8	31.5	65.7	0.36	0.25	21.07	1.47	10.6	34.4	12.42	435	0.00	36.14	37.66	1.61	6061
F+8	32.7	58.3	0.36	0.25	21.88	1.51	10.6	31.8	12.77	453	0.00	33.33	34.56	1.65	6230
F+10	36.6	94.1	0.41	0.28	21.67	1.41	11.9	57.5	11.96	461	0.00	53.75	57.41	1.21	6609
F+10	36.2	112.6	0.41	0.28	21.41	1.40	11.9	67.9	11.85	455	0.00	63.52	68.80	1.20	6548
Rill 5	slope = 9.53 %														
R+0	3.5	64.2	0.17	0.12	5.05	0.51	9.1	3.8	4.76	89	1.80	2.79	0.00	2.82	984
R+2	10.2	171.1	0.30	0.21	8.20	0.71	11.2	29.1	6.62	179	1.38	27.49	29.00	1.24	2438
R+2	13.2	161.2	0.30	0.21	10.62	0.87	11.2	35.4	8.12	242	1.38	33.84	36.48	1.52	2988
R+4	22.4	138.0	0.36	0.25	15.00	1.26	10.9	51.5	11.75	411	1.43	51.19	55.10	1.52	5200
R+4	23.5	104.2	0.36	0.25	15.71	1.28	10.9	40.7	11.94	421	1.43	40.17	42.92	1.55	5282
R+6	29.3	89.8	0.41	0.28	17.43	1.34	11.9	43.8	12.50	492	1.28	39.67	42.21	1.28	6212
R+6	34.6	218.0	0.41	0.28	20.64	1.35	11.9	125.8	12.59	498	1.28	116.40	133.31	1.29	6259
R+8	38.3	217.3	0.41	0.28	22.86	1.58	12.4	138.6	14.74	655	1.21	123.49	138.36	1.52	7310
R+8	42.2	174.5	0.41	0.28	25.18	1.69	12.4	122.7	15.77	725	1.21	109.15	119.58	1.62	7819

RILL DATA ANALYSIS SOIL: MIAMIAN DATE: JULY 5, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 9.53 %														
F+2	8.4	54.7	0.25	0.17	8.23	0.91	6.8	7.6	8.47	156	0.00	12.56	12.88	2.35	2558
F+2	8.5	40.2	0.25	0.17	8.29	0.91	6.8	5.7	8.52	158	0.00	9.31	9.48	2.37	2573
F+4	16.2	38.9	0.31	0.21	12.77	1.12	8.5	10.5	10.49	272	0.00	13.68	13.95	1.88	3942
F+4	16.7	33.0	0.31	0.21	13.19	1.15	8.5	9.2	10.75	282	0.00	12.00	12.20	1.93	4040
F+6	24.9	49.3	0.33	0.23	18.02	1.38	9.4	20.5	12.90	409	0.00	24.15	24.78	1.96	5274
F+6	24.3	29.2	0.33	0.23	17.62	1.36	9.4	11.8	12.69	399	0.00	13.95	14.16	1.92	5188
F+8	31.0	73.6	0.39	0.27	19.43	1.39	10.5	38.1	12.97	459	0.00	40.40	42.18	1.47	6134
F+8	31.6	45.2	0.39	0.27	19.77	1.41	10.5	23.8	13.14	468	0.00	25.26	25.93	1.49	6216
F+10	36.7	51.4	0.42	0.29	21.20	1.42	11.5	31.4	13.23	517	0.00	30.42	31.38	1.28	6775
F+10	34.9	47.4	0.42	0.29	20.20	1.37	11.5	27.6	12.75	489	0.00	26.74	27.52	1.23	6529
Rill 6	slope = 9.92 %														
R+2	8.5	55.5	0.29	0.20	6.99	0.65	10.0	7.8	6.31	149	1.60	7.12	0.00	1.24	2177
R+2	10.8	68.2	0.29	0.20	8.92	0.77	10.0	12.3	7.47	192	1.60	12.06	12.15	1.47	2579
R+4	16.2	91.0	0.34	0.24	11.40	0.93	11.0	24.6	9.02	280	1.41	23.40	24.77	1.29	3650
R+4	19.1	111.8	0.34	0.24	13.41	1.06	11.0	35.5	10.29	340	1.41	34.44	36.70	1.47	4161
R+6	28.8	180.6	0.43	0.30	16.08	1.22	12.1	86.7	11.84	461	1.25	78.58	86.66	1.07	6033
R+6	30.6	140.0	0.43	0.30	17.10	1.27	12.1	71.4	12.32	489	1.25	64.53	69.82	1.11	6280
R+8	40.7	116.1	0.45	0.31	22.08	1.45	13.9	78.8	14.07	690	1.02	61.77	65.93	1.19	7389
R+8	44.0	204.2	0.45	0.31	23.85	1.53	13.9	149.7	14.85	748	1.02	118.34	131.78	1.26	7797
F+2	7.9	128.4	0.31	0.21	6.21	0.72	6.9	16.8	7.03	120	0.00	27.20	29.30	1.26	2535
F+2	8.3	126.8	0.31	0.21	6.52	0.75	6.9	17.5	7.31	127	0.00	28.22	30.36	1.31	2636
F+4	16.8	147.9	0.34	0.23	12.20	1.09	8.4	41.5	10.62	273	0.00	54.86	59.51	1.61	4175
F+4	16.2	110.1	0.34	0.23	11.76	1.06	8.4	29.8	10.33	262	0.00	39.39	41.81	1.56	4062
F+6	26.4	110.3	0.35	0.24	18.53	1.42	9.3	48.4	13.76	445	0.00	57.95	61.35	1.96	5574
F+6	26.4	100.9	0.35	0.24	18.57	1.42	9.3	44.4	13.79	446	0.00	53.13	55.97	1.97	5583
F+8	34.9	113.0	0.43	0.29	19.87	1.42	10.4	65.6	13.76	498	0.00	70.07	75.13	1.29	6872
F+8	37.1	98.9	0.43	0.29	21.17	1.49	10.4	61.2	14.41	534	0.00	65.34	69.39	1.35	7198
F+10	38.3	106.7	0.38	0.26	24.49	1.57	11.7	68.1	15.21	648	0.00	64.90	68.57	1.80	6768
F+10	42.6	69.5	0.38	0.26	27.29	1.70	11.7	49.4	16.47	730	0.00	47.12	48.78	1.95	7327

RILL DATA ANALYSIS SOIL: LEWISBURG DATE: JULY 7, 1988

Specific Weight = 9786.3 N/m^3 Transport Coefficient = 99.80 Kinematic Viscosity = 0.841 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 39.92 g/mn/m^2

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E	D_r g/s/m^2	D_c	F	Re
Rill 1	slope = 8.13 %														
R+0	3.7	47.2	0.26	0.18	3.52	0.42	5.3	2.9	3.34	32	5.12	1.01	4.12	0.86	1280
R+2	11.4	59.4	0.46	0.31	6.07	0.57	5.9	11.3	4.53	57	4.54	16.80	18.36	0.37	3090
R+2	11.3	73.7	0.46	0.31	6.02	0.57	5.9	13.9	4.53	57	4.54	21.72	23.10	0.37	3090
R+4	20.7	66.7	0.49	0.34	10.29	0.88	7.6	23.0	7.00	141	3.34	30.11	32.87	0.50	5104
R+4	19.4	63.3	0.49	0.34	9.63	0.84	7.6	20.4	6.68	132	3.34	26.33	28.84	0.48	4872
R+6	27.8	48.3	0.52	0.35	13.12	1.05	9.4	22.4	8.35	227	2.59	23.88	26.15	0.54	6430
R+6	24.8	97.8	0.52	0.35	11.69	0.97	9.4	40.5	7.72	201	2.59	45.17	49.49	0.49	5940
R+8	32.0	116.1	0.48	0.33	16.14	1.22	10.6	62.0	9.71	320	2.22	62.85	68.94	0.71	6985
R+8	32.5	110.0	0.48	0.33	16.38	1.23	10.6	59.6	9.79	323	2.22	60.34	65.95	0.72	7043
R+10	37.9	61.4	0.48	0.33	19.00	1.22	11.8	38.8	9.71	355	1.94	34.71	37.29	0.70	7019
R+10	39.1	54.9	0.48	0.33	19.59	1.24	11.8	35.7	9.86	364	1.94	31.82	34.17	0.72	7134
F+2	6.3	6.8	0.26	0.18	5.98	0.69	7.1	0.7	5.50	91	0.00	1.13	1.14	1.41	2116
F+2	6.5	9.6	0.26	0.18	6.11	0.70	7.1	1.0	5.59	93	0.00	1.64	1.65	1.43	2152
F+4	26.0	24.8	0.34	0.24	18.41	1.47	8.2	10.8	11.73	330	0.00	14.51	14.75	1.70	6006
F+4	14.6	20.5	0.34	0.24	10.37	0.98	8.2	5.0	7.78	178	0.00	6.76	6.86	1.13	3981
F+6	20.3	38.3	0.38	0.26	13.02	1.12	8.8	12.9	8.92	235	0.00	16.30	16.77	1.06	5036
F+6	21.4	38.8	0.38	0.26	13.73	1.17	8.8	13.8	9.29	249	0.00	17.42	17.92	1.11	5242
F+8	31.4	53.5	0.43	0.30	17.69	1.33	10.0	28.0	10.55	342	0.00	31.10	32.45	0.97	6793
F+8	31.2	69.5	0.43	0.30	17.57	1.32	10.0	36.1	10.50	339	0.00	40.16	42.46	0.96	6757
F+10	35.7	90.0	0.46	0.32	18.79	1.31	11.2	53.6	10.42	375	0.00	53.29	57.50	0.83	7185
F+10	35.6	60.5	0.46	0.32	18.72	1.31	11.2	35.9	10.39	374	0.00	35.65	37.48	0.83	7163
Rill 2	slope = 8.28 %														
R+0	4.3	41.6	0.26	0.18	4.05	0.53	4.7	3.0	4.29	42	5.84	1.28	4.00	1.07	1642
R+2	11.9	53.3	0.41	0.28	6.98	0.71	5.9	10.6	5.75	81	4.54	15.42	16.08	0.57	3489
R+2	11.5	38.5	0.41	0.28	6.76	0.69	5.9	7.4	5.59	78	4.54	9.42	10.92	0.56	3390
R+4	19.1	56.2	0.47	0.32	9.86	0.93	7.6	17.9	7.53	158	3.34	22.68	24.06	0.58	5196
R+4	18.4	52.7	0.47	0.32	9.50	0.90	7.6	16.1	7.29	150	3.34	20.12	21.48	0.56	5028
R+6	25.9	64.1	0.50	0.34	12.64	1.00	10.0	27.6	8.10	230	2.40	28.30	29.87	0.56	5901
R+6	23.6	70.0	0.50	0.34	11.55	0.93	10.0	27.6	7.53	206	2.40	28.24	29.70	0.52	5488
R+8	30.3	55.1	0.48	0.33	15.37	1.12	11.2	27.8	9.07	305	2.07	25.57	27.14	0.67	6367
R+8	31.0	82.5	0.48	0.33	15.71	1.14	11.2	42.5	9.23	313	2.07	40.22	42.57	0.69	6481
R+10	38.5	59.9	0.47	0.33	19.69	1.34	11.8	38.4	10.85	420	1.94	34.35	36.27	0.82	7557
R+10	38.1	64.0	0.47	0.33	19.47	1.33	11.8	40.6	10.77	415	1.94	36.41	38.43	0.81	7501

RILL DATA ANALYSIS SOIL: LEWISBURG DATE: JULY 7, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 8.28 %														
F+2	6.2	47.3	0.24	0.17	6.19	0.71	7.1	4.9	5.76	97	0.00	7.75	7.95	1.63	2069
F+2	6.5	23.6	0.24	0.17	6.42	0.73	7.1	2.5	5.93	102	0.00	4.01	4.06	1.68	2131
F+4	12.9	64.0	0.34	0.23	9.36	0.90	8.2	13.8	7.31	162	0.00	18.60	19.44	1.10	3596
F+4	14.2	50.6	0.34	0.23	10.29	0.97	8.2	12.0	7.87	181	0.00	16.17	16.73	1.19	3874
F+6	19.6	38.3	0.37	0.25	12.82	1.07	9.4	12.5	8.67	240	0.00	14.79	15.19	1.07	4723
F+6	20.1	64.3	0.37	0.25	13.12	1.09	9.4	21.5	8.83	246	0.00	25.38	26.56	1.09	4810
F+8	28.8	46.2	0.42	0.29	16.69	1.27	10.0	22.2	10.28	329	0.00	24.67	25.54	0.99	6323
F+8	29.6	72.5	0.42	0.29	17.14	1.29	10.0	35.7	10.49	339	0.00	39.72	41.97	1.01	6452
F+10	32.1	68.9	0.43	0.29	18.25	1.24	11.8	36.8	10.06	375	0.00	34.77	36.59	0.94	6297
F+10	32.8	68.2	0.43	0.29	18.67	1.27	11.8	37.3	10.25	385	0.00	35.21	37.03	0.96	6415
Rill 3	slope = 7.22 %														
R+2	11.7	40.9	0.45	0.31	6.38	0.63	9.3	8.0	4.45	88	2.61	6.90	6.04	0.38	3342
R+2	11.7	34.9	0.45	0.31	6.36	0.62	9.3	6.8	4.38	85	2.61	5.47	4.95	0.37	3289
R+4	20.0	44.8	0.52	0.36	9.34	0.84	11.0	14.9	5.93	158	2.13	12.99	13.17	0.37	5180
R+4	19.0	35.4	0.52	0.36	8.88	0.81	10.8	11.2	5.72	148	2.17	9.34	9.75	0.36	4995
R+6	25.2	39.4	0.50	0.34	12.30	0.99	11.8	16.5	6.99	217	1.94	13.68	14.40	0.48	5842
R+6	26.6	31.8	0.50	0.34	12.99	1.03	11.9	14.1	7.28	234	1.90	11.22	12.13	0.50	6078
R+8	31.4	38.8	0.51	0.35	15.09	1.08	12.6	20.3	7.63	264	1.77	16.17	16.99	0.51	6486
R+8	32.8	35.5	0.51	0.35	15.74	1.11	12.7	19.4	7.84	279	1.74	15.18	16.05	0.52	6666
R+10	39.1	57.3	0.47	0.32	20.32	1.35	13.4	37.3	9.54	394	1.62	29.30	30.57	0.74	7489
R+10	37.7	55.4	0.47	0.32	19.61	1.31	13.3	34.9	9.25	373	1.64	27.53	28.72	0.72	7268
F+2	7.0	20.0	0.22	0.15	7.66	0.78	8.0	2.3	5.52	104	0.00	3.23	3.27	1.93	2052
F+2	7.0	23.2	0.22	0.15	7.69	0.78	8.0	2.7	5.54	104	0.00	3.75	3.80	1.93	2056
F+4	13.4	34.8	0.34	0.24	9.48	0.82	9.7	7.8	5.79	135	0.00	8.89	9.16	0.83	3350
F+4	14.1	62.0	0.34	0.24	9.96	0.85	9.9	14.6	5.97	144	0.00	16.39	17.28	0.86	3456
F+6	20.1	73.5	0.44	0.30	11.06	0.86	11.0	24.6	6.06	164	0.00	24.91	27.00	0.53	4507
F+6	22.0	69.5	0.44	0.30	12.07	0.91	11.3	25.4	6.42	183	0.00	25.05	26.97	0.56	4768
F+8	31.7	96.0	0.49	0.34	15.57	1.04	12.6	50.7	7.37	252	0.00	44.75	49.97	0.51	6129
F+8	32.1	48.4	0.49	0.34	15.77	1.05	12.6	25.9	7.43	256	0.00	22.73	23.96	0.52	6180
F+10	39.8	53.9	0.48	0.33	19.92	1.22	13.5	35.7	8.65	343	0.00	29.44	31.09	0.63	7059
F+10	34.4	71.9	0.48	0.33	17.22	1.12	12.9	41.2	7.89	286	0.00	35.48	38.32	0.57	6437

RILL DATA ANALYSIS SOIL: LEWISBURG DATE: JULY 7, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 4	slope = 7.51 %														
R+2	11.2	45.2	0.39	0.27	6.92	0.68	9.2	8.4	5.00	103	2.65	7.51	0.00	0.55	3177
R+2	11.4	44.3	0.39	0.27	7.01	0.69	9.3	8.4	5.07	106	2.64	7.43	0.00	0.56	3224
R+4	20.0	43.1	0.46	0.32	10.52	0.92	11.0	14.4	6.76	193	2.12	12.43	12.54	0.54	5053
R+4	19.8	40.4	0.46	0.32	10.41	0.92	10.9	13.4	6.76	192	2.13	11.43	11.65	0.54	5053
R+6	25.8	37.0	0.50	0.34	12.51	1.04	11.8	15.9	7.64	250	1.92	13.02	13.83	0.52	6188
R+6	26.1	28.8	0.50	0.34	12.64	1.05	11.9	12.5	7.72	254	1.91	9.78	10.78	0.52	6248
R+8	32.6	55.8	0.51	0.35	15.60	1.19	12.7	30.3	8.75	328	1.74	24.77	25.92	0.58	7171
R+8	32.6	43.7	0.51	0.35	15.60	1.19	12.7	23.7	8.75	328	1.74	19.02	20.10	0.58	7171
R+10	39.1	82.0	0.50	0.35	18.81	1.34	13.4	53.5	9.85	414	1.62	42.65	45.04	0.66	8040
R+10	39.6	53.1	0.50	0.35	19.04	1.34	13.5	35.0	9.85	415	1.61	27.29	28.72	0.66	8040
F+2	7.4	53.5	0.27	0.18	6.76	0.70	8.1	6.6	5.12	94	0.00	9.00	9.33	1.23	2201
F+2	7.3	57.7	0.27	0.18	6.68	0.69	8.1	7.0	5.08	93	0.00	9.64	10.03	1.22	2185
F+4	15.0	86.9	0.37	0.25	9.94	0.83	10.1	21.8	6.13	153	0.00	24.00	25.90	0.78	3633
F+4	15.6	54.5	0.37	0.25	10.35	0.86	10.2	14.2	6.29	160	0.00	15.47	16.19	0.80	3727
F+6	20.8	49.2	0.37	0.25	13.73	1.02	11.1	17.1	7.51	228	0.00	17.06	17.73	0.94	4472
F+6	18.9	88.6	0.37	0.25	12.45	0.96	10.8	27.9	7.07	202	0.00	28.74	30.92	0.89	4206
F+8	30.7	66.1	0.41	0.28	18.02	1.19	12.5	33.9	8.71	320	0.00	30.14	31.86	0.86	5834
F+8	28.4	82.2	0.41	0.28	16.68	1.13	12.2	39.0	8.30	291	0.00	35.49	38.10	0.82	5557
F+10	35.0	75.6	0.44	0.30	19.14	1.22	13.0	44.1	8.93	346	0.00	37.73	40.37	0.77	6412
F+10	34.7	97.5	0.44	0.30	18.99	1.21	13.0	56.5	8.89	342	0.00	48.43	52.93	0.77	6382
Rill 5	slope = 6.96 %														
R+2	10.7	30.5	0.38	0.26	6.85	0.64	9.1	5.4	4.36	83	2.70	3.93	4.36	0.52	2879
R+2	10.8	29.8	0.38	0.26	6.94	0.65	9.1	5.4	4.43	85	2.69	3.85	4.41	0.53	2924
R+4	18.5	39.5	0.42	0.29	10.81	0.90	10.7	12.2	6.13	162	2.19	10.43	11.33	0.60	4447
R+4	18.5	44.2	0.42	0.29	10.82	0.90	10.7	13.7	6.13	163	2.19	11.97	12.77	0.60	4447
R+6	29.8	40.4	0.49	0.34	14.66	0.97	12.4	20.1	6.61	210	1.81	16.21	17.04	0.46	5691
R+6	29.9	60.3	0.49	0.34	14.70	0.98	12.4	30.1	6.68	213	1.81	25.17	26.15	0.47	5750
R+8	38.8	47.1	0.50	0.34	18.82	1.23	13.4	30.4	8.38	324	1.62	23.66	24.95	0.57	7307
R+8	38.8	50.8	0.50	0.34	18.83	1.23	13.4	32.8	8.38	324	1.62	25.63	27.00	0.57	7307
R+10	39.9	57.8	0.43	0.30	22.38	1.41	13.5	38.5	9.61	401	1.60	30.08	31.70	0.87	7258
R+10	42.4	62.5	0.43	0.30	23.73	1.47	13.7	44.1	10.02	435	1.56	34.12	35.95	0.91	7567

RILL DATA ANALYSIS SOIL: LEWISBURG DATE: JULY 7, 1988

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 5	slope = 6.96 %														
F+2	6.4	13.5	0.24	0.17	6.47	0.69	7.8	1.4	4.71	80	0.00	2.06	2.08	1.38	1979
F+2	6.1	5.7	0.24	0.17	6.17	0.67	7.7	0.6	4.57	75	0.00	0.84	0.84	1.34	1922
F+4	12.6	34.4	0.33	0.23	9.23	0.81	9.6	7.3	5.53	124	0.00	8.43	8.69	0.85	3207
F+4	11.1	28.5	0.33	0.23	8.11	0.75	9.2	5.3	5.09	105	0.00	6.37	6.53	0.78	2952
F+6	22.6	75.3	0.39	0.26	14.20	1.04	11.4	28.3	7.05	213	0.00	27.64	29.66	0.81	4743
F+6	23.3	68.1	0.39	0.26	14.70	1.06	11.5	26.5	7.21	222	0.00	25.62	27.29	0.82	4847
F+8	31.8	64.7	0.42	0.29	18.20	1.19	12.6	34.3	8.09	290	0.00	30.19	32.13	0.77	5985
F+8	37.5	65.6	0.42	0.29	21.45	1.32	13.2	41.0	8.97	355	0.00	34.38	36.53	0.85	6635
F+10	36.4	83.3	0.45	0.31	19.66	1.23	13.1	50.6	8.40	319	0.00	42.79	46.59	0.71	6588
Rill 6	slope = 7.07 %														
R+0	3.2	73.5	0.24	0.17	3.18	0.37	6.3	3.9	2.56	26	4.18	2.67	0.00	0.74	1067
R+2	9.2	50.9	0.39	0.27	5.70	0.64	8.7	7.8	4.43	81	2.85	7.16	7.13	0.49	2990
R+2	10.7	54.5	0.39	0.27	6.61	0.72	9.1	9.7	4.98	101	2.70	9.18	9.69	0.55	3364
R+4	18.5	62.4	0.44	0.30	10.28	0.90	10.7	19.2	6.23	166	2.19	17.75	18.74	0.56	4670
R+4	18.2	55.1	0.44	0.30	10.13	0.89	10.7	16.7	6.16	163	2.20	15.22	16.22	0.55	4618
R+6	23.4	51.5	0.46	0.31	12.44	1.04	11.5	20.1	7.20	222	1.99	17.43	18.73	0.59	5651
R+6	22.9	50.1	0.46	0.31	12.18	1.02	11.4	19.1	7.06	214	2.01	16.59	17.86	0.57	5542
R+8	26.0	50.5	0.43	0.29	14.77	1.13	11.9	21.9	7.82	259	1.91	18.57	19.97	0.73	5734
R+8	24.7	61.5	0.43	0.29	14.04	1.09	11.7	25.3	7.54	242	1.95	22.10	23.55	0.70	5531
R+10	38.2	86.7	0.49	0.33	19.08	1.37	13.3	55.2	9.48	388	1.63	44.42	47.51	0.68	7921
R+10	37.0	81.9	0.49	0.33	18.47	1.34	13.2	50.5	9.27	372	1.65	40.87	43.62	0.67	7747
F+2	6.2	49.2	0.29	0.20	5.25	0.58	7.7	5.1	4.03	62	0.00	7.34	7.66	0.82	1996
F+2	6.1	36.0	0.29	0.20	5.12	0.57	7.7	3.6	3.97	61	0.00	5.28	5.44	0.81	1965
F+4	13.8	60.2	0.36	0.25	9.27	0.80	9.8	13.9	5.53	128	0.00	15.69	16.61	0.72	3441
F+4	13.7	46.8	0.36	0.25	9.21	0.80	9.8	10.7	5.51	127	0.00	12.15	12.70	0.71	3426
F+6	19.6	61.9	0.42	0.29	11.23	0.87	10.9	20.2	6.06	162	0.00	20.58	21.98	0.57	4402
F+6	19.6	85.7	0.42	0.29	11.25	0.88	10.9	28.0	6.06	162	0.00	28.54	31.33	0.58	4406
F+8	29.5	48.8	0.44	0.30	16.37	1.10	12.3	24.0	7.64	260	0.00	21.64	22.70	0.68	5749
F+8	28.6	49.3	0.44	0.30	15.82	1.08	12.2	23.5	7.48	249	0.00	21.36	22.43	0.66	5626
F+10	33.5	42.4	0.46	0.32	17.57	1.14	12.8	23.7	7.90	284	0.00	20.52	21.43	0.63	6286

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Specific Weight = 9786.3 N/m^3 Transport Coefficient = 91.49 Kinematic Viscosity = 0.758 x 10^{-6} m^2/s
Velocity Factor = 0.687 D_i = 34.09 g/mn/m^2

Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 1	slope = 6.45 %														
R+0	3.4	43.8	0.23	0.16	3.59	0.64	4.1	2.5	4.04	31	5.78	0.91	4.51	1.31	1934
R+2	10.9	45.4	0.40	0.28	6.60	0.80	5.9	8.3	5.05	61	3.88	11.72	13.50	0.53	4236
R+2	11.1	43.5	0.40	0.28	6.73	0.81	5.9	8.1	5.11	62	3.88	11.37	13.22	0.54	4289
R+4	19.3	64.0	0.41	0.28	11.42	1.03	6.5	20.6	6.50	98	3.47	31.86	34.52	0.66	5565
R+4	19.2	77.5	0.41	0.28	11.35	1.03	6.5	24.8	6.50	98	3.47	39.03	42.47	0.66	5565
R+6	22.9	70.6	0.39	0.27	14.38	1.23	8.8	27.0	7.77	175	2.39	31.55	34.26	0.88	6277
R+6	24.4	77.5	0.39	0.27	15.30	1.28	8.8	31.5	8.08	185	2.39	37.27	40.52	0.92	6533
R+8	31.0	62.5	0.44	0.30	17.30	1.38	10.6	32.3	8.71	249	1.90	32.04	34.59	0.78	7921
R+8	31.5	58.6	0.44	0.30	17.59	1.40	10.6	30.8	8.84	255	1.90	30.42	32.82	0.79	8036
R+10	41.1	80.6	0.46	0.32	21.73	1.61	11.8	55.2	10.17	349	1.65	50.52	54.78	0.82	9758
R+10	42.3	63.2	0.46	0.32	22.34	1.64	11.8	44.6	10.36	359	1.65	40.43	43.40	0.83	9940
F+2	6.6	56.3	0.29	0.20	5.54	0.75	6.5	6.2	4.76	61	0.00	10.64	11.21	0.97	2871
F+2	6.6	47.5	0.29	0.20	5.52	0.75	6.5	5.2	4.75	61	0.00	8.94	9.34	0.97	2864
F+4	13.5	75.4	0.38	0.26	8.57	0.99	7.1	17.0	6.27	101	0.00	26.72	29.24	0.73	5006
F+4	14.4	101.7	0.38	0.26	9.11	1.03	7.1	24.3	6.51	107	0.00	38.30	43.44	0.76	5195
F+6	19.8	63.0	0.45	0.31	10.75	1.09	8.2	20.9	6.86	136	0.00	28.13	30.55	0.58	6422
F+6	20.9	77.9	0.45	0.31	11.30	1.12	8.2	27.1	7.06	141	0.00	36.52	40.54	0.60	6608
F+8	30.3	46.6	0.48	0.33	15.27	1.27	8.8	23.6	8.05	184	0.00	29.67	31.75	0.59	8101
F+8	29.9	46.2	0.48	0.33	15.06	1.26	8.8	23.0	7.99	182	0.00	29.00	31.01	0.58	8042
F+10	35.4	56.6	0.53	0.37	16.06	1.31	9.4	33.4	8.26	204	0.00	39.44	43.06	0.49	9229
F+10	37.7	62.9	0.53	0.37	17.12	1.33	9.4	39.5	8.40	210	0.00	46.68	51.73	0.50	9385
Rill 2	slope = 6.45 %														
R+2	11.0	39.2	0.40	0.28	6.67	0.79	6.5	7.2	4.99	66	3.47	8.93	10.71	0.53	4183
R+2	10.6	39.3	0.40	0.28	6.39	0.77	6.5	6.9	4.86	63	3.47	8.43	10.20	0.51	4077
R+4	15.8	49.9	0.41	0.28	9.38	0.99	7.6	13.2	6.25	109	2.85	16.27	18.01	0.63	5349
R+4	16.0	116.1	0.41	0.28	9.50	1.00	7.6	31.0	6.31	111	2.85	42.24	46.23	0.64	5403
R+6	22.9	63.5	0.39	0.27	14.35	1.28	9.4	24.2	8.08	198	2.21	26.40	28.48	0.92	6533
R+6	24.0	70.8	0.39	0.27	15.05	1.31	9.4	28.3	8.27	205	2.21	31.23	33.63	0.94	6686
R+8	31.0	71.1	0.44	0.30	17.30	1.32	10.6	36.8	8.34	233	1.90	36.72	39.63	0.75	7577
R+8	32.3	56.5	0.44	0.30	18.03	1.35	10.6	30.5	8.52	241	1.90	30.09	32.33	0.77	7749
R+10	41.1	66.1	0.46	0.32	21.72	1.53	11.8	45.3	9.66	323	1.65	41.16	44.22	0.78	9273
R+10	38.5	52.0	0.46	0.32	20.31	1.46	11.8	33.3	9.22	301	1.65	29.82	31.93	0.74	8849

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	g/s/m^2	- - ->		
Rill 2	slope = 6.45 %														
F+2	6.1	23.5	0.29	0.20	5.16	0.69	6.5	2.4	4.34	53	0.00	4.13	4.22	0.88	2616
F+2	6.4	23.5	0.29	0.20	5.35	0.70	6.5	2.5	4.44	55	0.00	4.28	4.37	0.90	2676
F+4	12.2	55.8	0.38	0.26	7.73	0.89	7.1	11.3	5.63	86	0.00	17.84	19.12	0.65	4494
F+4	13.7	55.1	0.38	0.26	8.73	0.97	7.1	12.6	6.09	97	0.00	19.86	21.27	0.71	4866
F+6	18.7	51.0	0.45	0.31	10.16	0.95	8.8	15.9	6.03	120	0.00	20.08	21.55	0.51	5641
F+6	21.3	47.6	0.45	0.31	11.54	1.03	8.8	16.9	6.53	135	0.00	21.28	22.73	0.55	6113
F+8	30.5	52.8	0.48	0.33	15.38	1.16	9.4	26.9	7.35	172	0.00	31.74	34.52	0.54	7402
F+8	28.9	64.7	0.48	0.33	14.52	1.13	9.4	31.1	7.12	164	0.00	36.74	40.75	0.52	7168
F+10	35.9	61.9	0.53	0.37	16.26	1.20	10.6	37.0	7.58	202	0.00	38.78	42.83	0.45	8473
F+10	35.2	55.3	0.53	0.37	15.98	1.19	10.6	32.4	7.51	199	0.00	34.04	37.15	0.45	8391
Rill 3	slope = 5.56 %														
R+2	11.2	20.6	0.40	0.28	6.75	0.79	6.5	3.8	4.30	53	3.47	3.12	4.51	0.45	4183
R+2	11.3	30.2	0.40	0.28	6.82	0.80	6.5	5.7	4.35	54	3.47	6.27	6.86	0.46	4236
R+4	19.2	46.2	0.41	0.28	11.36	1.13	7.6	14.8	6.15	107	2.85	18.59	19.83	0.62	6106
R+4	18.9	55.8	0.41	0.28	11.21	1.12	7.6	17.6	6.09	105	2.85	22.72	23.93	0.62	6051
R+6	25.2	43.9	0.39	0.27	15.82	1.42	8.8	18.5	7.73	173	2.39	20.85	22.59	0.88	7247
R+6	26.4	38.6	0.39	0.27	16.58	1.46	8.8	17.0	7.94	181	2.39	19.03	20.78	0.90	7451
R+8	34.9	43.8	0.44	0.30	19.49	1.35	10.6	25.5	7.34	193	1.90	24.88	26.67	0.66	7749
R+8	35.7	44.0	0.44	0.30	19.90	1.37	10.6	26.2	7.45	197	1.90	25.57	27.41	0.67	7864
R+10	43.0	42.0	0.46	0.32	22.68	1.50	11.8	30.1	8.16	251	1.65	26.76	28.67	0.66	9091
R+10	41.7	66.0	0.46	0.32	22.00	1.47	11.8	45.8	8.00	243	1.65	41.59	45.19	0.64	8910
F+2	6.6	50.8	0.29	0.20	5.53	0.62	6.5	5.6	3.37	37	0.00	9.57	10.38	0.69	2363
F+2	6.7	45.5	0.29	0.20	5.59	0.62	6.5	5.1	3.40	37	0.00	8.68	9.33	0.69	2380
F+4	14.0	49.7	0.38	0.26	8.86	0.85	7.1	11.6	4.62	64	0.00	18.22	20.09	0.54	4278
F+4	13.5	61.1	0.38	0.26	8.56	0.83	7.1	13.7	4.52	62	0.00	21.63	24.45	0.53	4190
F+6	19.9	59.9	0.45	0.31	10.80	0.95	7.6	19.9	5.19	83	0.00	28.89	33.04	0.44	5637
F+6	22.1	71.4	0.45	0.31	11.96	1.01	7.6	26.2	5.51	91	0.00	38.14	45.04	0.47	5988
F+8	32.1	57.3	0.48	0.33	16.14	1.35	8.8	30.6	7.35	161	0.00	38.58	42.80	0.54	8592
F+8	32.7	43.5	0.48	0.33	16.45	1.37	8.8	23.7	7.43	164	0.00	29.87	32.28	0.54	8685
F+10	38.6	70.1	0.53	0.37	17.53	1.34	11.2	45.1	7.28	201	0.00	44.88	50.84	0.43	9437
F+10	42.0	62.7	0.53	0.37	19.03	1.37	11.2	43.8	7.46	208	0.00	43.56	48.91	0.44	9670

RILL DATA ANALYSIS SOIL: MIAMI DATE: JULY 8, 1988

Source	Flow l/mn	Conc. g/l	M Vel. m/s	A Vel. m/s	Area cm^2	Hrad cm	Width cm	Q_s g/s	τ N/m^2	T_c g/s	E <- - -	D_r $g/s/m^2$	D_c - - ->	F	Re
Rill 4	slope = 6.00 %														
R+2	11.1	33.5	0.40	0.28	6.73	0.82	6.5	6.2	4.81	62	3.47	7.20	0.00	0.51	4342
R+2	11.1	30.9	0.40	0.28	6.71	0.82	6.5	5.7	4.81	62	3.47	6.36	0.00	0.51	4342
R+4	18.7	36.0	0.41	0.28	11.09	1.05	8.8	11.2	6.16	123	2.39	11.76	12.67	0.62	5673
R+4	18.9	39.6	0.41	0.28	11.21	1.06	8.8	12.5	6.22	125	2.39	13.35	14.25	0.63	5727
R+6	22.9	43.4	0.39	0.27	14.34	1.23	10.6	16.6	7.22	188	1.90	15.47	16.96	0.82	6277
R+6	24.2	49.9	0.39	0.27	15.15	1.27	10.6	20.1	7.45	197	1.90	19.18	20.86	0.85	6481
R+8	28.5	63.4	0.44	0.30	15.90	1.17	11.8	30.1	6.87	194	1.65	26.79	28.69	0.62	6716
R+8	31.3	58.9	0.44	0.30	17.42	1.23	11.8	30.7	7.22	209	1.65	27.31	29.40	0.65	7060
R+10	39.8	70.1	0.46	0.32	21.01	1.36	11.8	46.5	7.98	243	1.65	42.24	46.40	0.64	8243
R+10	39.5	60.1	0.46	0.32	20.85	1.35	11.8	39.5	7.92	240	1.65	35.68	38.85	0.64	8182
F+2	6.3	33.6	0.29	0.20	5.27	0.58	6.5	3.5	3.39	37	0.00	6.03	0.00	0.69	2202
F+2	6.6	34.4	0.29	0.20	5.58	0.60	6.5	3.8	3.53	39	0.00	6.54	0.00	0.72	2292
F+4	13.8	55.3	0.38	0.26	8.77	0.83	7.1	12.7	4.84	69	0.00	20.05	22.17	0.56	4162
F+4	15.7	40.7	0.38	0.26	9.96	0.90	7.1	10.7	5.29	79	0.00	16.78	18.03	0.62	4547
F+6	20.1	39.6	0.45	0.31	10.89	0.77	8.2	13.3	4.51	72	0.00	17.92	19.80	0.38	4540
F+6	21.5	39.0	0.45	0.31	11.67	0.81	8.2	14.0	4.74	78	0.00	18.91	20.86	0.40	4771
F+8	29.1	56.4	0.48	0.33	14.62	0.95	9.4	27.3	5.55	113	0.00	32.23	36.91	0.41	6015
F+8	29.2	67.6	0.48	0.33	14.68	0.95	9.4	32.9	5.57	113	0.00	38.82	45.87	0.41	6032
F+10	37.7	68.6	0.53	0.37	17.09	1.05	11.2	43.1	6.18	157	0.00	42.83	50.07	0.37	7425
F+10	39.6	77.0	0.53	0.37	17.97	1.09	11.2	50.8	6.39	165	0.00	50.55	60.42	0.38	7680
Rill 5	slope = 7.40 %														
R+0	2.9	48.7	0.23	0.16	3.07	0.48	4.1	2.4	3.48	24	5.78	0.57	0.00	1.13	1451
R+2	11.0	96.5	0.40	0.28	6.62	0.73	5.3	17.6	5.29	59	4.37	32.61	36.03	0.56	3865
R+2	10.4	56.5	0.40	0.28	6.29	0.70	5.3	9.8	5.07	55	4.37	16.21	18.37	0.53	3706
R+4	17.2	69.3	0.41	0.28	10.19	0.96	7.6	19.9	6.95	128	2.85	26.01	29.46	0.70	5187
R+4	16.9	73.8	0.41	0.28	10.03	0.98	7.6	20.8	7.10	132	2.85	27.39	30.99	0.72	5295
R+6	25.7	156.4	0.39	0.27	16.14	1.25	9.4	67.1	9.05	235	2.21	76.97	90.26	1.03	6379
R+6	23.3	172.6	0.39	0.27	14.62	1.17	9.4	67.1	8.47	212	2.21	76.96	91.65	0.96	5971
R+8	34.4	156.3	0.44	0.30	19.15	1.51	10.0	89.5	10.94	331	2.05	97.39	113.37	0.98	8668
R+8	32.8	144.2	0.44	0.30	18.29	1.46	10.0	78.8	10.57	315	2.05	85.53	98.51	0.95	8381
R+10	38.2	125.2	0.46	0.32	20.15	1.56	10.6	79.6	11.30	368	1.90	81.64	92.36	0.91	9455
R+10	39.8	156.7	0.46	0.32	21.04	1.61	10.6	104.1	11.66	386	1.90	107.31	124.90	0.94	9758

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Source	Flow	Conc.	M Vel.	A Vel.	Area	Hrad	Width	Q_s	τ	T_c	E	D_r	D_c	F	Re
	l/mn	g/l	m/s	m/s	cm^2	cm	cm	g/s	N/m^2	g/s	<- - -	$g/s/m^2$	- - ->		
Rill 5	slope = 7.40 %														
F+2	5.2	91.7	0.29	0.20	4.36	0.67	6.5	7.9	4.82	63	0.00	13.60	14.54	0.98	2536
F+2	5.8	74.7	0.29	0.20	4.88	0.69	6.5	7.2	5.00	66	0.00	12.41	13.14	1.02	2632
F+4	11.7	145.1	0.38	0.26	7.41	0.85	7.1	28.2	6.17	99	0.00	44.42	52.29	0.72	4297
F+4	12.6	134.3	0.38	0.26	8.00	0.90	7.1	28.2	6.50	107	0.00	44.41	51.57	0.76	4522
F+6	21.5	186.4	0.45	0.31	11.65	1.14	8.2	66.8	8.23	178	0.00	90.07	112.89	0.70	6717
F+6	27.0	138.7	0.45	0.31	14.65	1.28	8.2	62.5	9.24	212	0.00	84.31	99.92	0.78	7537
F+8	35.0	170.2	0.48	0.33	17.60	1.50	9.4	99.2	10.86	308	0.00	117.09	141.31	0.79	9533
F+8	35.4	205.3	0.48	0.33	17.80	1.51	9.4	121.0	10.92	311	0.00	142.86	181.03	0.80	9583
F+10	42.4	142.7	0.53	0.37	19.25	1.34	10.6	100.9	9.72	293	0.00	105.91	129.79	0.58	9468
F+10	42.3	132.2	0.53	0.37	19.19	1.34	10.6	93.2	9.70	293	0.00	97.78	117.70	0.58	9454
Rill 6	slope = 7.16 %														
R+0	2.9	49.4	0.23	0.16	3.05	0.54	3.5	2.4	3.79	24	6.84	0.63	0.00	1.23	1632
R+2	9.8	48.3	0.40	0.28	5.93	0.75	4.7	7.9	5.26	52	4.99	13.67	15.26	0.55	3971
R+2	10.0	63.5	0.40	0.28	6.03	0.76	4.7	10.5	5.33	53	4.99	19.92	21.05	0.56	4024
R+4	17.0	85.0	0.41	0.28	10.08	1.06	7.1	24.1	7.43	131	3.13	34.81	38.82	0.75	5727
R+4	17.6	113.6	0.41	0.28	10.43	1.08	7.1	33.3	7.57	135	3.13	49.32	55.77	0.77	5835
R+6	21.8	77.6	0.39	0.27	13.68	1.30	8.8	28.2	9.11	222	2.39	33.13	36.52	1.03	6635
R+6	21.7	108.1	0.39	0.27	13.64	1.29	8.8	39.2	9.04	220	2.39	46.96	52.17	1.03	6584
R+8	28.7	106.1	0.44	0.30	15.98	1.30	10.0	50.7	9.11	252	2.05	54.28	60.71	0.82	7462
R+8	28.3	125.5	0.44	0.30	15.78	1.29	10.0	59.2	9.04	249	2.05	63.75	72.44	0.81	7405
R+10	36.5	129.2	0.46	0.32	19.29	1.46	10.6	78.7	10.23	317	1.90	80.65	92.25	0.82	8849
R+10	37.9	118.0	0.46	0.32	20.04	1.49	10.6	74.6	10.45	327	1.90	76.43	86.56	0.84	9031
F+2	5.7	101.5	0.29	0.20	4.75	0.56	6.5	9.6	3.95	46	0.00	16.44	18.41	0.80	2145
F+2	5.7	75.6	0.29	0.20	4.82	0.57	6.5	7.2	3.99	47	0.00	12.42	13.47	0.81	2170
F+4	13.1	100.5	0.38	0.26	8.34	0.85	7.1	22.0	5.98	94	0.00	34.66	39.46	0.70	4301
F+4	14.1	84.7	0.38	0.26	8.95	0.90	7.1	19.9	6.28	102	0.00	31.33	34.88	0.73	4514
F+6	19.8	95.2	0.45	0.31	10.74	0.96	8.2	31.5	6.70	131	0.00	42.47	48.61	0.57	5642
F+6	21.5	116.3	0.45	0.31	11.63	1.02	8.2	41.6	7.12	143	0.00	56.12	66.29	0.60	6003
F+8	31.5	97.7	0.48	0.33	15.85	1.28	9.4	51.3	8.96	231	0.00	60.54	68.46	0.66	8127
F+8	31.2	89.0	0.48	0.33	15.73	1.27	9.4	46.4	8.92	229	0.00	54.73	61.15	0.65	8086
F+10	35.3	106.3	0.53	0.37	16.02	1.29	10.6	62.6	9.02	263	0.00	65.65	74.99	0.54	9081
F+10	42.5	95.1	0.53	0.37	19.29	1.43	10.6	67.4	10.06	309	0.00	70.74	79.80	0.60	10121

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Sharpsburg					
1	2.40	2.40	2.57	2.47	
2	3.55	3.52	3.77	3.56	
3	7.53	4.06	8.92	4.22	
4	4.75	3.42	5.01	3.35	
5	4.67	2.07	6.35	2.49	
6	4.72	2.93	5.11	2.96	
Mean	4.60	3.07	5.29	3.18	1.85
S.D.	1.56	0.68	2.00	0.62	0.44
C.V.	34%	22%	38%	19%	24%
Hersh					
1	11.83	1.90	13.91	1.88	
2	11.06	1.20	13.09	1.05	
3	11.47	2.17	13.21	2.14	
4	8.69	2.16	9.57	2.11	
5	8.79	1.27	9.93	1.15	
6	6.96	1.85	7.62	1.84	
Mean	9.80	1.76	11.22	1.70	3.93
S.D.	1.77	0.39	2.31	0.44	1.35
C.V.	18%	22%	21%	26%	34%
Keith					
1	1.00	-3.69	0.96	-4.64	
2	[-0.21	40.16	-0.21	40.16]	
3	5.67	1.72	0.93	-3.87	
4	1.74	-1.42	0.99	-4.05	
5	1.35	-1.63	0.98	-1.93	
6	4.41	1.72	2.14	1.02	
Mean	2.83	-0.66	1.18	-2.84	3.36
S.D.	1.86	2.10	0.48	2.23	0.82
C.V.	66%	-318%	41%	-78%	24%

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Amarillo					
1	23.64	1.63	42.90	1.86	
2	32.96	1.68	65.60	1.81	
3	[1.83	0.72	1.89	0.69]	
4	27.57	1.37	38.61	1.31	
5	20.38	1.33	38.57	1.60	
6	24.79	1.47	40.83	1.71	
Mean	25.87	1.50	45.30	1.66	4.12
S.D.	4.23	0.14	10.28	0.20	1.37
C.V.	16%	9%	23%	12%	33%
Woodward					
1	12.50	-0.72	19.16	-0.02	
2	18.43	0.70	26.35	0.81	
3	17.96	0.17	18.58	1.33	
4	18.55	0.26	23.08	1.48	
5	26.93	1.41	35.26	2.18	
6	18.27	0.64	27.37	2.09	
Mean	18.77	0.41	24.97	1.31	4.00
S.D.	4.22	0.64	5.65	0.75	1.45
C.V.	22%	157%	23%	58%	36%
Heiden					
1	10.34	3.04	11.56	3.03	
2	7.31	3.86	7.89	3.88	
3	9.65	2.89	11.25	2.96	
4	5.23	3.18	5.39	3.14	
5	8.55	2.17	9.57	2.14	
6	7.01	2.3	7.77	2.23	
Mean	8.02	2.91	8.91	2.90	1.70
S.D.	1.71	0.56	2.15	0.59	0.73
C.V.	21%	19%	24%	20%	43%

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Whitney					
1	28.87	5.61	36.46	5.72	
2	21.92	5.02	25.70	4.98	
3	11.29	3.99	12.86	3.77	
4	20.02	5.14	24.48	5.24	
5	20.96	4.68	24.27	4.79	
6	14.32	3.50	16.22	3.47	
Mean	19.56	4.66	23.33	4.66	2.74
S.D.	5.63	0.71	7.53	0.79	0.88
C.V.	29%	15%	32%	17%	32%
Academy					
1	5.20	1.69	5.66	1.68	
2	4.48	1.61	5.05	1.62	
3	2.87	1.38	2.79	1.15	
4	[-6.25	4.47	-6.25	4.47]	
5	6.64	2.24	7.20	2.22	
6	7.11	1.44	7.81	1.33	
Mean	5.26	1.67	5.70	1.60	2.88
S.D.	1.53	0.31	1.77	0.37	0.64
C.V.	29%	18%	31%	23%	22%
Los Banos					
1	[-0.35	7.16	-0.35	7.16]	
2	1.08	3.94	1.11	4.01	
3	2.01	2.50	2.16	2.36	
4	0.24	2.25	0.24	2.17	
5	[-0.10	10.32	*Unstable*]		
6	[-1.69	0.17	-0.79	0.19]	
Mean	1.11	2.90	1.17	2.85	2.50
S.D.	0.72	0.74	0.78	0.83	0.32
C.V.	65%	26%	67%	29%	13%

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Portneuf					
1	10.27	3.55	11.95	3.62	
2	14.10	4.04	17.61	4.20	
3	8.73	3.38	10.24	3.54	
4	7.90	2.64	9.08	2.73	
5	8.78	2.69	10.32	2.79	
6	4.30	1.91	4.52	1.78	
Mean	9.01	3.04	10.62	3.11	1.26
S.D.	2.92	0.70	3.88	0.78	0.32
C.V.	32%	23%	37%	25%	25%
Nansene					
1	14.07	3.24	18.83	3.59	
2	17.49	3.26	24.53	3.50	
3	18.89	3.16	27.54	3.41	
4	13.98	2.58	16.44	2.11	
5	26.56	3.52	45.56	3.75	
6	24.35	1.89	51.49	1.92	
Mean	19.22	2.94	30.73	3.05	3.12
S.D.	4.78	0.55	13.20	0.74	0.65
C.V.	25%	19%	43%	24%	21%
Palouse					
1	5.23	0.07	5.26	-0.70	
2	5.77	0.80	6.00	0.36	
3	7.20	2.11	7.82	2.01	
4	7.20	2.08	7.96	2.09	
5	6.61	1.20	7.02	0.90	
6	5.13	0.32	5.24	-0.25	
Mean	6.19	1.10	6.55	0.74	4.32
S.D.	0.86	0.79	1.12	1.05	1.42
C.V.	14%	72%	17%	143%	33%

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	$K_r x10^3$ s/m	τ_c Pa	$K_r x10^3$ s/m	τ_c Pa	$K_i x10^{-6}$ kg s/m^4
Zahl					
1	6.99	2.67	7.22	2.51	
2	9.66	3.06	10.64	3.17	
3	11.19	3.30	12.28	3.33	
4	9.19	3.64	9.87	3.67	
5	13.77	3.86	15.92	3.97	
6	15.71	4.52	17.62	4.47	
Mean	11.09	3.51	12.26	3.52	3.17
S.D.	2.92	0.59	3.56	0.62	0.78
C.V.	26%	17%	29%	18%	25%
Pierre					
1	17.39	5.34	21.46	5.39	
2	10.83	3.38	12.42	3.44	
3	12.84	4.88	15.06	5.03	
4	10.09	5.00	11.52	5.01	
5	4.40	5.39	4.42	5.24	
6	4.93	4.76	5.17	4.67	
Mean	10.08	4.79	11.68	4.80	2.18
S.D.	4.48	0.67	5.81	0.65	0.38
C.V.	44%	14%	50%	13%	17%
Williams					
1	3.35	3.80	3.28	3.70	
2	2.88	2.41	2.89	2.22	
3	4.60	2.90	4.75	2.80	
4	5.66	3.35	5.95	3.32	
5	6.16	5.05	6.28	4.93	
6	2.76	2.71	3.85	3.79	
Mean	4.24	3.37	4.48	3.42	2.94
S.D.	1.33	0.87	1.29	0.84	0.68
C.V.	31%	26%	29%	24%	23%

	D_r vs τ		D_c vs τ		
	$K_r x10^3$ s/m	τ_c Pa	$K_r x10^3$ s/m	τ_c Pa	$K_i x10^{-6}$ kg s/m^4
Barnes - ND					
1	3.18	3.52	3.26	3.51	
2	2.08	1.05	2.18	1.12	
3	2.96	2.42	3.10	2.46	
4	3.40	2.21	3.58	2.24	
5	3.11	3.00	3.26	3.04	
6	4.35	2.84	4.46	2.74	
Mean	3.18	2.51	3.31	2.52	1.71
S.D.	0.67	0.77	0.67	0.75	0.36
C.V.	21%	31%	20%	30%	21%
Sverdrup					
1	7.62	1.62	8.62	1.63	
2	12.71	1.81	15.50	1.83	
3	5.72	1.79	6.21	1.80	
4	11.32	1.54	15.55	1.69	
5	5.00	0.66	5.44	0.56	
6	7.56	0.80	8.70	0.71	
Mean	8.32	1.37	10.00	1.37	2.11
S.D.	2.80	0.46	4.08	0.53	0.57
C.V.	34%	34%	41%	38%	27%
Barnes - MN					
1	7.66	3.57	8.70	3.78	
2	6.13	4.03	7.22	4.51	
3	4.13	2.94	4.37	2.93	
4	6.27	5.28	8.37	6.10	
5	3.35	2.99	3.71	3.27	
6	5.21	3.21	5.50	3.17	
Mean	5.46	3.67	6.31	3.96	1.60
S.D.	1.43	0.81	1.91	1.09	0.41
C.V.	26%	22%	30%	27%	26%

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	K_rx10^3 s/m	τ_c Pa	K_rx10^3 s/m	τ_c Pa	K_ix10^{-6} kg s/m^4
Mexico					
1	2.10	0.44	1.87	-0.21	
2	4.39	1.03	5.15	1.21	
3	2.89	0.78	2.97	0.64	
4	5.32	1.09	5.94	1.08	
5	3.71	1.66	3.91	1.62	
6	2.05	0.07	2.02	-0.21	
Mean	3.41	0.85	3.64	0.69	2.97
S.D.	1.19	0.50	1.52	0.70	0.44
C.V.	35%	60%	42%	101%	15%
Grenada					
1	5.66	4.71	6.41	5.06	
2	4.55	3.97	4.82	3.99	
3	4.56	2.80	4.55	2.30	
4	7.55	4.53	8.46	4.74	
5	10.51	5.31	12.13	5.47	
6	6.80	5.14	7.36	5.23	
Mean	6.60	4.41	7.29	4.47	2.63
S.D.	2.06	0.84	2.56	1.08	0.47
C.V.	31%	19%	35%	24%	18%
Tifton					
1	8.59	2.94	9.14	2.93	
2	7.09	2.72	11.08	3.23	
3	7.72	3.09	10.75	3.37	
4	7.82	3.82	11.23	4.05	
5	[0.28	-9.74	*Unstable*]		
6	[-6.64	6.21	-6.64	6.21]	
Mean	7.81	3.14	11.27	3.47	0.77
S.D.	0.53	0.41	1.34	0.45	0.38
C.V.	7%	13%	12%	13%	50%

	D_r vs τ		D_c vs τ		
	K_rx10^3 s/m	τ_c Pa	K_rx10^3 s/m	τ_c Pa	K_ix10^{-6} kg s/m^4
Bonifay					
1	20.07	1.74	29.08	1.83	
2	13.16	0.89	17.84	0.94	
3	14.20	0.74	19.17	0.68	
4	18.07	1.27	24.85	1.28	
5	6.73	0.22	7.47	-0.01	
6	8.84	1.38	8.82	1.37	
Mean	13.51	1.04	17.87	1.02	0.87
S.D.	4.69	0.49	7.81	0.58	0.58
C.V.	35%	47%	44%	57%	67%
Cecil (Eroded)					
1	3.82	4.63	3.87	4.58	
2	2.16	4.51	2.30	4.61	
3	5.75	4.89	6.33	4.96	
4	[-5.78	5.57	0.60	0.00]	
5	4.29	4.46	4.72	4.53	
6	2.02	3.77	1.99	3.70	
Mean	3.61	4.45	3.84	4.48	1.86
S.D.	1.39	0.37	1.60	0.42	0.43
C.V.	39%	8%	42%	9%	23%
Hiwassee					
1	6.84	2.62	7.57	2.66	
2	13.93	2.81	16.15	2.80	
3	8.41	1.97	10.38	2.13	
4	9.34	2.31	11.45	2.47	
5	6.81	1.97	7.57	1.99	
6	8.02	2.05	8.53	1.90	
Mean	8.89	2.29	10.28	2.33	1.88
S.D.	2.42	0.33	2.99	0.34	0.31
C. V	27%	14%	29%	15%	17%

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Gaston					
1	5.22	6.47	5.47	6.51	
2	5.24	6.00	5.51	6.00	
3	6.92	4.77	7.49	4.82	
4	3.59	4.12	3.78	4.11	
5	4.11	4.80	4.29	4.80	
6	[2.77	5.73	2.80	5.59]	
Mean	4.18	5.32	4.89	4.37	2.04
S.D.	2.14	0.81	1.50	2.11	0.24
C.V.	51%	15%	31%	48%	12%
Opequon					
1	3.68	7.07	3.90	7.25	
2	4.05	6.20	4.39	6.47	
3	3.55	8.00	3.79	8.21	
4	2.77	6.36	2.88	6.45	
5	2.56	4.91	2.59	4.76	
6	3.59	4.69	3.66	4.53	
Mean	3.37	6.21	3.54	6.28	3.20
S.D.	0.53	1.15	0.61	1.30	0.47
C.V.	16%	19%	17%	21%	15%
Frederick					
1	9.25	7.55	10.01	7.64	
2	8.60	6.73	9.36	6.87	
3	6.49	5.87	6.78	5.75	
4	6.41	5.36	6.81	5.42	
5	9.24	7.98	9.76	7.95	
6	7.59	6.36	7.92	6.20	
Mean	7.93	6.64	8.44	6.64	2.48
S.D.	1.18	0.91	1.34	0.93	0.68
C.V.	15%	14%	16%	14%	27%

	D_r vs τ		D_c vs τ		
	$K_r x10^3$	τ_c	$K_r x10^3$	τ_c	$K_i x10^{-6}$
	s/m	Pa	s/m	Pa	kg s/m^4
Manor					
1	2.59	-1.06	2.92	-0.13	
2	4.01	1.58	5.79	3.81	
3	4.42	3.20	6.61	5.49	
4	5.32	3.03	5.61	2.93	
5	6.35	5.40	6.87	5.51	
6	4.43	3.99	4.59	3.89	
Mean	4.52	2.69	5.40	3.58	2.69
S.D.	1.15	2.03	1.33	1.90	0.57
C.V.	26%	75%	25%	53%	21%
Caribou					
1	3.39	2.87	3.35	2.34	
2	5.10	5.39	5.37	5.44	
3	3.70	4.45	3.73	4.25	
4	4.63	4.43	4.99	4.66	
5	4.04	3.58	4.21	3.56	
6	5.18	5.21	5.43	5.23	
Mean	4.34	4.32	4.51	4.25	1.45
S.D.	0.68	0.88	0.80	1.05	0.13
C.V.	16%	20%	18%	25%	9%
Collamer					
1	21.90	5.76	28.23	5.96	
2	25.56	6.71	33.91	6.99	
3	13.12	5.76	14.97	5.97	
4	14.71	5.54	17.46	5.71	
5	16.85	5.92	20.37	6.07	
6	23.58	7.36	29.84	7.58	
Mean	19.29	6.18	24.13	6.38	3.46
S.D.	4.65	0.65	6.92	0.67	0.51
C.V.	24%	10%	29%	11%	15%

K_r, τ_c, K_i SUMMARY

	D_r vs τ		D_c vs τ		
	$K_r x10^3$ s/m	τ_c Pa	$K_r x10^3$ s/m	τ_c Pa	$K_i x10^{-6}$ kg s/m^4
Miamian					
1	6.02	5.11	6.51	5.27	
2	6.06	4.70	6.47	4.75	
3	9.07	6.40	9.67	6.42	
4	9.44	4.28	10.75	4.50	
5	9.88	4.86	11.22	5.06	
6	11.38	6.37	13.12	6.69	
Mean	8.64	5.29	9.62	5.45	1.65
S.D.	1.97	0.81	2.44	0.82	0.29
C.V.	23%	15%	25%	15%	17%
Lewisburg					
1	6.05	2.05	6.39	1.84	
2	5.17	3.21	5.21	2.92	
3	4.15	3.34	4.52	3.52	
4	5.43	4.38	7.24	5.28	
5	5.19	3.51	5.42	3.46	
6	5.70	3.24	6.41	3.45	
Mean	5.28	3.29	5.87	3.41	2.47
S.D.	0.59	0.68	0.90	1.02	0.28
C.V.	11%	21%	15%	30%	11%

	D_r vs τ		D_c vs τ		
	$K_r x10^3$ s/m	τ_c Pa	$K_r x10^3$ s/m	τ_c Pa	$K_i x10^{-6}$ kg s/m^4
Miami					
1	6.07	2.63	6.19	2.26	
2	5.26	2.29	5.38	1.96	
3	6.02	3.27	6.38	3.20	
4	9.02	4.39	12.16	4.96	
5	12.53	3.61	14.61	3.65	
6	10.68	3.82	12.23	3.90	
Mean	8.26	3.34	9.49	3.32	1.97
S.D.	2.69	0.71	3.61	1.01	0.48
C.V.	33%	21%	38%	30%	24%

SOIL PROPERTIES ANALYSIS

Soil	Clay %	Silt %	VF Sand %	Sand %	Rock %	W.D. Clay %	COLE cm/cm	1/3 B %	15 B %	Ag Stab %	EGME mg/g
Sharpsburg	39.8	55.4	4.6	4.8	0.0	7.50	0.086	27.0	17.4	4.00	36
Hersh	9.7	15.9	33.6	74.4	0.0	1.10	0.006	12.7	4.3	8.50	7
Keith	19.3	31.8	44.0	48.9	0.0	3.40	0.019	19.6	10.3	6.00	15
Amarillo	7.3	7.7	21.1	85.0	0.0	3.50	0.010	7.3	3.4	3.00	6
Woodward	13.9	42.4	35.8	43.7	0.3	3.20	0.017	15.9	7.1	3.00	8
Heiden	53.1	38.3	4.5	8.6	0.0	17.60	0.101	28.8	18.9	61.00	38
Whitney	7.2	21.8	8.1	71.1	4.0	4.10	0.004	6.7	2.6	13.00	3
Academy	8.2	29.1	20.2	62.7	4.0	2.60	0.017	8.6	3.5	9.00	4
Los Banos	43.0	41.0	11.3	16.0	0.0	12.25	0.089	29.1	19.1	15.00	45
Portneuf	11.1	67.4	19.3	21.5	0.0	3.50	0.012	24.7	8.3	33.00	11
Nansene	11.1	68.8	18.1	20.1	0.0	2.20	0.011	34.0	7.3	20.00	11
Palouse	20.1	70.1	8.8	9.8	0.0	2.00	0.026	26.3	9.0	20.00	18
Zahl	24.0	29.7	12.5	46.3	9.0	6.20	0.027	20.3	10.2	12.00	23
Pierre	49.5	40.9	7.3	9.6	0.0	14.30	0.091	31.2	19.4	40.33	46
Williams	26.0	32.4	11.5	41.6	5.0	8.77	0.037	23.5	11.9	5.00	25
Barnes - ND	24.6	36.0	12.7	39.5	4.0	7.10	0.040	28.5	12.7	13.25	21
Sverdrup	7.9	16.8	3.7	75.3	0.3	2.80	0.014	13.4	5.4	13.00	8
Barnes - MN	17.0	34.4	11.4	48.6	6.0	8.60	0.030	21.8	9.3	6.00	15
Mexico	26.0	68.7	1.1	5.3	0.0	6.40	0.047	32.1	11.5	6.00	
Grenada	20.2	77.8	1.5	2.0	0.0	4.95	0.019	23.5	10.9	5.00	20
Tifton	2.8	10.8	13.3	86.4	23.0	2.50	0.002	6.0	2.1	3.00	3
Bonifay	3.3	5.5	16.2	91.2	1.0	1.50	0.000	4.9	1.1	3.00	2
Cecil (Eroded)	19.8	15.6	5.9	64.6	6.0	14.40	0.010	14.2	8.3	15.00	8
Hiwassee	14.7	21.6	4.3	63.7	3.0	10.60	0.015	22.6	6.4	3.00	6
Gaston	39.1	25.4	7.5	35.5	0.3	24.50	0.030	22.0	14.8	22.50	22
Opequon	31.1	31.2	5.9	37.7	14.0	24.40	0.024	25.3	14.2	29.25	17
Frederick	16.6	58.3	5.2	25.1	14.0	8.40	0.018	26.6	7.2	22.50	10
Manor	25.7	30.7	7.1	43.6	8.0	12.60	0.031	25.9	11.7	6.20	16
Caribou	12.7	40.3	12.8	47.0	47.0	7.70	0.007	26.9	8.9	10.00	14
Collamer	15.0	78.0	4.6	7.0	0.3	6.90	0.012	24.7	6.9	10.00	12
Miamian	25.3	44.1	6.4	30.6	3.0	12.20	0.008	11.6	10.9	10.00	22
Lewisburg	29.3	32.2	10.9	38.5	6.0	19.40	0.024	17.3	11.3	17.50	17
Miami	23.1	72.7	2.0	4.2	0.0	7.50	0.020	22.7	10.0	4.75	19

SOIL PROPERTIES ANALYSIS

Soil	Ca	Mg	Na	K	CEC NH_4	Fe	Al	SAR	Cond.	Org C	$CaCO_3$
	<- - - - - - meq/100 g - - - - - ->					%	%		mmhos	%	%
Sharpsburg	19.4	6.6	0.1	1.4	29.4	1.1	0.2		0.00	1.85	0
Hersh	4.8	1.2	0.0	0.4	7.2	0.2	0.03		0.12	0.59	0
Keith	12.9	3.1	0.03	1.5	18.3	0.5	0.1	TR	0.38	0.91	0
Amarillo	5.9	0.5	0.3	0.4	5.1	0.2	0.03	TR	0.25	0.16	0
Woodward	0.0	1.5	0.03	0.5	11.6	0.6	0.03	TR	0.61	1.29	7
Heiden	0.0	1.0	0.1	0.6	33.3	0.6	0.1	TR	0.66	1.36	45
Whitney	2.8	0.8	0.1	0.3	3.4	0.5	0.03	1.0	0.11	0.19	0
Academy	0.3	1.4	0.0	0.3	5.3	0.9	0.1	TR	0.84	0.41	0
Los Banos	28.2	9.2	0.6	1.5	38.8	0.9	0.1	1.0	0.78	1.43	0
Portneuf	0.0	6.3	0.2	0.6	12.6	0.3	0.03	1.0	0.76	0.72	23
Nansene	8.6	2.3	0.1	1.5	15.1	0.9	0.1	TR	0.93	1.49	0
Palouse	12.7	2.5	0.1	0.8	19.6	0.9	0.1	TR	1.37	1.76	0
Zahl	22.6	4.3	0.1	0.6	20.0	0.9	0.1	TR	0.72	1.69	TR
Pierre	32.5	7.1	0.1	1.5	36.8	1.5	0.1	TR	0.51	1.46	TR
Williams	24.6	6.2	0.1	0.9	22.7	0.7	0.1	TR	0.81	1.79	TR
Barnes - ND	13.8	5.0	0.03	2.5	24.1	0.9	0.1	TR	0.42	3.26	TR
Sverdrup	9.5	2.1	0.0	0.2	11.0	0.5	0.1	TR	0.35	1.28	0
Barnes - MN	0.0	5.1	0.0	0.4	19.5	0.8	0.1	TR	0.72	1.98	1
Mexico	15.6	3.0	0.1	0.5	21.3	1.6	0.2		0.00	1.56	0
Grenada	4.1	1.5	0.1	0.4	12.0	1.7	0.2		0.00	1.27	0
Tifton	1.5	0.3	0.03	0.1	2.1	0.5	0.1		0.00	0.46	0
Bonifay	0.7	0.1	0.1	0.1	1.7	0.2	0.1		0.00	0.32	0
Cecil (Eroded)	2.2	0.6	0.03	0.2	3.5	2.4	0.2		0.00	0.70	0
Hiwassee	1.6	0.4	0.03	0.4	4.4	1.5	0.2		0.00	0.83	0
Gaston	4.8	1.8	0.03	0.8	9.2	4.5	0.5		0.00	1.12	0
Opequon	10.3	1.0	0.1	0.4	12.9	2.7	0.3		0.00	1.42	0
Frederick	5.0	1.1	0.0	0.2	8.4	1.4	0.2		0.00	1.32	0
Manor	7.9	1.7	0.03	0.5	11.9	3.1	0.4		0.00	0.96	0
Caribou	5.5	1.5	0.1	0.6	12.8	1.3	0.4		0.20	2.28	0
Collamer	7.8	0.5	0.1	0.1	8.9	1.1	0.2		0.00	1.01	0
Miamian	10.0	4.5	0.0	0.7	14.4	1.4	0.1		0.00	1.75	0
Lewisburg	11.2	3.2	0.03	0.3	12.5	1.6	0.2		0.00	0.87	9
Miami	11.0	1.2	0.1	0.4	13.3	1.4	0.2		0.00	0.82	0

LOCATION INFORMATION

Soil	County	State	Latitude	Longitude	Elevation	Directions
Sharpsburg	Lancaster	NE	40-51-20-	096-28- -	374 m MSL	2160' W & 420' S of the NE corner of SEC.12 T.10N, R.8W
Hersh	Valley	NE	41-42-30-N	098-48-45-W		75' W & .4 mi W of the NE corner of SEC.16 T.20N, R.13W
Keith	Banner	NE	41-49-04-N	103-58-01-W	1586 m MSL	1320' N & 500' W of SE corner of SEC.35 T.18N, R.58W
Amarillo	Howard	TX	32-16- -N	101-30- -W	686 m MSL	Located on the ARS Research Station at Big Spring, TX
Woodward	Harper	OK	36-49-24-N	099-25-12-W	572 m MSL	84 m W & 152 m S of NE corner of SEC.18 T.27N, R.22W
Heiden	Falls	TX	31-27-16-N	096-52-52-W	160 m MSL	From Riesel: 2.0 mi E on FR 1860, 0.6 mi S 0.6 mi W 1.5 mi S on on Co.Rd. 400' E in field
Whitney	Madera	CA	37-00-31-N	120-57-05-E	104 m MSL	1500' W & 600' S of NE corner of SEC.1 T.11S, R.18E
Academy	Fresno	CA	36-52-01-N	119-33-46-E	146 m MSL	700' E & 200' N of SW corner of SEC.22 T.12S, R.22E
Los Banos	Merced	CA	39-25-00-N	120-57-00-E	76 m MSL	1650' W & 600' S of NE corner of SEC.26 T.10S,R.9E
Portneuf	Twin Falls	ID				on ARS Research Station: Kimberly, ID
Nansene	Whitman	WA				
Palouse	Whitman	WA				on ARS Research Station: Pullman, WA
Zahl	Roosevelt	MT				
Pierre	Pennington	SD				

LOCATION INFORMATION

Soil	County	State	Latitude	Longitude	Elevation	Directions
Williams	Sheridan	ND	47-25-00-N	100-25-00-W	614 m MSL	2585' N & 1915' W of SE corner of SEC.1 T.145N, R.77W
Barnes - ND	Sheridan	ND	47-34- -N	100-06- -W	584 m MSL	2340' S & 2515' E of NW corner of SEC.9 T.147N, R.74W
Sverdrup	Grant	MN				NW 1/4 of the SW 1/4 of SEC.8 T.129N, R.41W
Barnes - MN	Stevens	MN				SW 1/4 of the NW 1/4 of SEC.35 T.126N, R.41W
Mexico	Boone	MO				on U.of MO. Agronomy Farm
Grenada	Panola	MS	34-30-57-S	089-05-04-W		0.45 mi 325' W of SE corner of SEC.32 T.6S, R.6W
Tifton	Worth	GA	31-30-29-N	083-39-23-W	107 m MSL	0.2 mi N of upper Tyty, 1 mi W of intersec. w Tyty Whiddom Mill Rd
Bonifay	Tift	GA	32-29-30-N	083-32-34-W	104 m MSL	
Cecil (Eroded)	Oconee	GA	30-52-07-N	083-27-07-W	232 m MSL	1.3 mi SW of HWY 207 on 53, 100' NW of HWY 53
Hiwassee	Oconee	GA	33-53-07-N	083-25-51-W	233 m MSL	1.2 mi W of HWY 441 on HWY 207 N side of HWY
Gaston	Rown	NC	35-41-45-N	080-37-10-E	213 m MSL	
Opequon	Allegany	MD	39-01-54-N	078-37-30-W	351 m MSL	5 mi S of Flintstone, Evitts Creek Quadrangle; 2 mi E of Twigstown, 800' S of Murleys Branch Rd.
Frederick	Washington	MD	41-43-59-N	078-01-57-W	201 m MSL	1.25 mi S MD/PA state line 500' NW of Little Cove Indian Springs Rd.

LOCATION INFORMATION

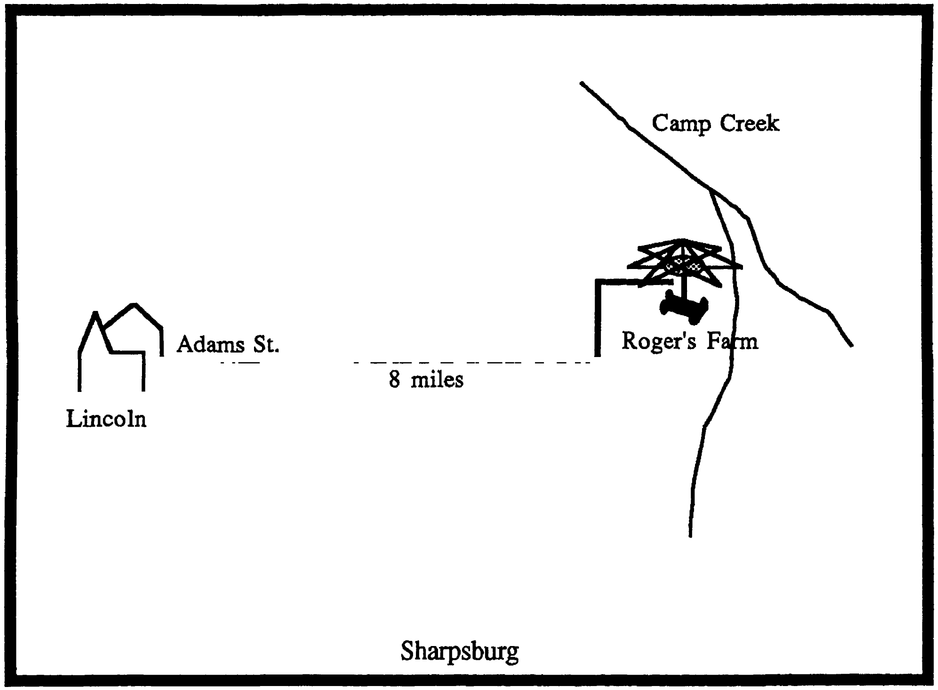
Soil	County	State	Latitude	Longitude	Elevation	Directions
Sharpsburg	Lancaster	NE	40-51-20-	096-28- -	374 m MSL	2160' W & 420' S of the NE corner of SEC.12 T.10N, R.8W
Hersh	Valley	NE	41-42-30-N	098-48-45-W		75' W & .4 mi W of the NE corner of SEC.16 T.20N, R.13W
Keith	Banner	NE	41-49-04-N	103-58-01-W	1586 m MSL	1320' N & 500' W of SE corner of SEC.35 T.18N, R.58W
Amarillo	Howard	TX	32-16- -N	101-30- -W	686 m MSL	Located on the ARS Research Station at Big Spring, TX
Woodward	Harper	OK	36-49-24-N	099-25-12-W	572 m MSL	84 m W & 152 m S of NE corner of SEC.18 T.27N, R.22W
Heiden	Falls	TX	31-27-16-N	096-52-52-W	160 m MSL	From Riesel: 2.0 mi E on FR 1860, 0.6 mi S 0.6 mi W 1.5 mi S on on Co.Rd. 400' E in field
Whitney	Madera	CA	37-00-31-N	120-57-05-E	104 m MSL	1500' W & 600' S of NE corner of SEC.1 T.11S, R.18E
Academy	Fresno	CA	36-52-01-N	119-33-46-E	146 m MSL	700' E & 200' N of SW corner of SEC.22 T.12S, R.22E
Los Banos	Merced	CA	39-25-00-N	120-57-00-E	76 m MSL	1650' W & 600' S of NE corner of SEC.26 T.10S,R.9E
Portneuf	Twin Falls	ID				on ARS Research Station: Kimberly, ID
Nansene	Whitman	WA				
Palouse	Whitman	WA				on ARS Research Station: Pullman, WA
Zahl	Roosevelt	MT				
Pierre	Pennington	SD				

LOCATION INFORMATION

Soil	County	State	Latitude	Longitude	Elevation	Directions
Williams	Sheridan	ND	47-25-00-N	100-25-00-W	614 m MSL	2585' N & 1915' W of SE corner of SEC.1 T.145N, R.77W
Barnes - ND	Sheridan	ND	47-34- -N	100-06- -W	584 m MSL	2340' S & 2515' E of NW corner of SEC.9 T.147N, R.74W
Sverdrup	Grant	MN				NW 1/4 of the SW 1/4 of SEC.8 T.129N, R.41W
Barnes - MN	Stevens	MN				SW 1/4 of the NW 1/4 of SEC.35 T.126N, R.41W
Mexico	Boone	MO				on U.of MO. Agronomy Farm
Grenada	Panola	MS	34-30-57-S	089-05-04-W		0.45 mi 325' W of SE corner of SEC.32 T.6S, R.6W
Tifton	Worth	GA	31-30-29-N	083-39-23-W	107 m MSL	0.2 mi N of upper Tyty, 1 mi W of intersec. w Tyty Whiddom Mill Rd
Bonifay	Tift	GA	32-29-30-N	083-32-34-W	104 m MSL	
Cecil (Eroded)	Oconee	GA	30-52-07-N	083-27-07-W	232 m MSL	1.3 mi SW of HWY 207 on 53, 100' NW of HWY 53
Hiwassee	Oconee	GA	33-53-07-N	083-25-51-W	233 m MSL	1.2 mi W of HWY 441 on HWY 207 N side of HWY
Gaston	Rown	NC	35-41-45-N	080-37-10-E	213 m MSL	
Opequon	Allegany	MD	39-01-54-N	078-37-30-W	351 m MSL	5 mi S of Flintstone, Evitts Creek Quadrangle; 2 mi E of Twigstown, 800' S of Murleys Branch Rd.
Frederick	Washington	MD	41-43-59-N	078-01-57-W	201 m MSL	1.25 mi S MD/PA state line 500' NW of Little Cove Indian Springs Rd.

LOCATION INFORMATION

Soil	County	State	Latitude	Longitude	Elevation	Directions
Manor	Howard	MD	39-14-50-N	076-55-35-W	145 m MSL	Clarksville Quad, 2000' E of intersection of Folly Quarter and Homewood Rds; 100' S of Homewood Rd.
Caribou	Aroostook	ME	46-00-55-N	068-01-11-E	190 m MSL	
Collamer	Tompkins	NY				Located on the Cornell University campus
Miamian	Montgomery	OH				
Lewisburg	Whitley	IN	41-09-42-N	084-34-05-W	275 m MSL	528' S & 596' W of NE 1/4 of SEC.12 T.13N, R.8E 1/2 mi S of USSO SHEET 18. 400 W
Miami	Montgomery	IN	39-52-42-N	087-05-35-W	220 m MSL	1452' W & 1056' S of NE 1/4 of SEC.34 T.17N, R.6W SHEET 67 1/4 mi S of HWY 47



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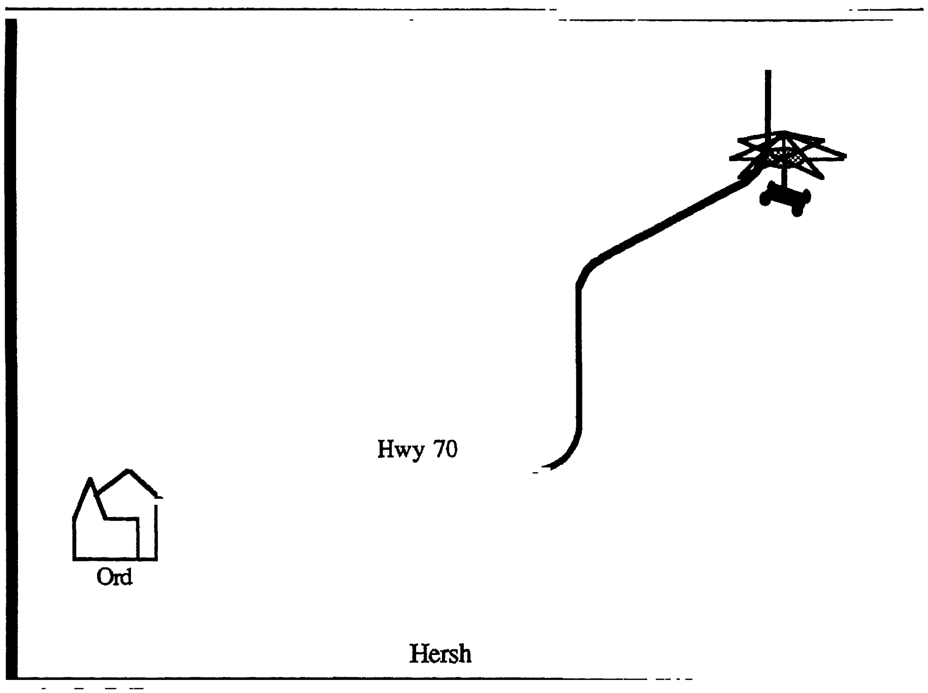

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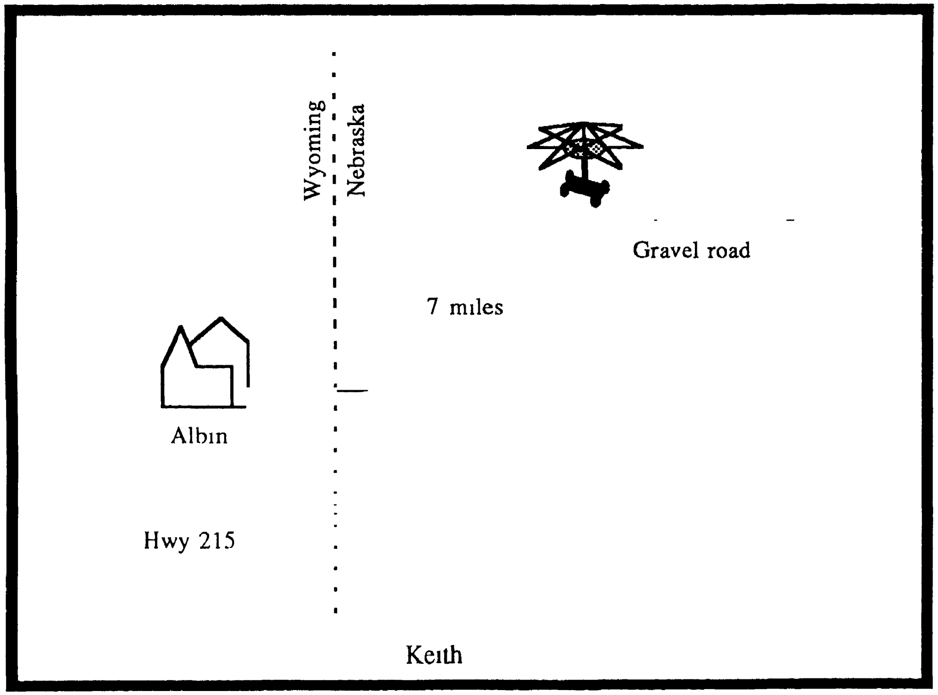

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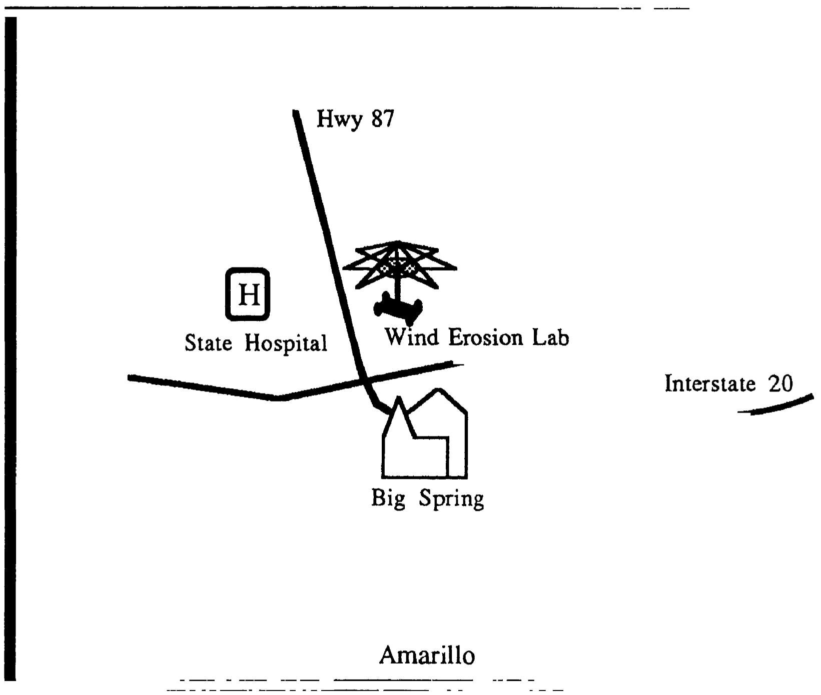

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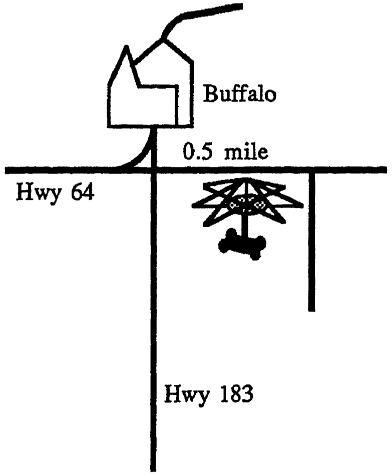

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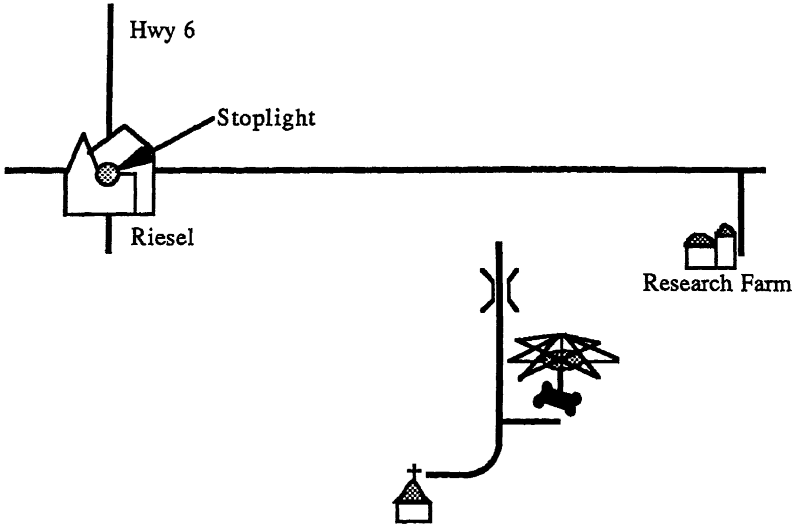

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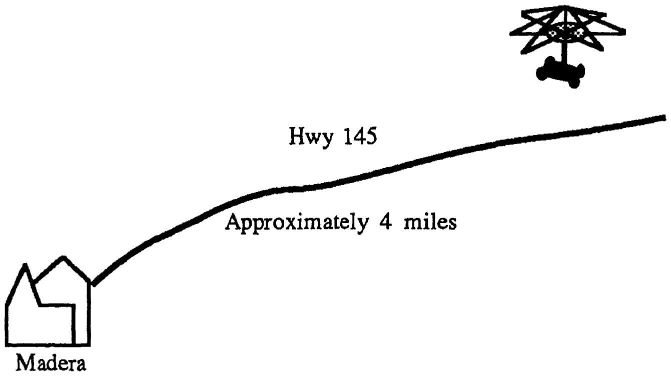

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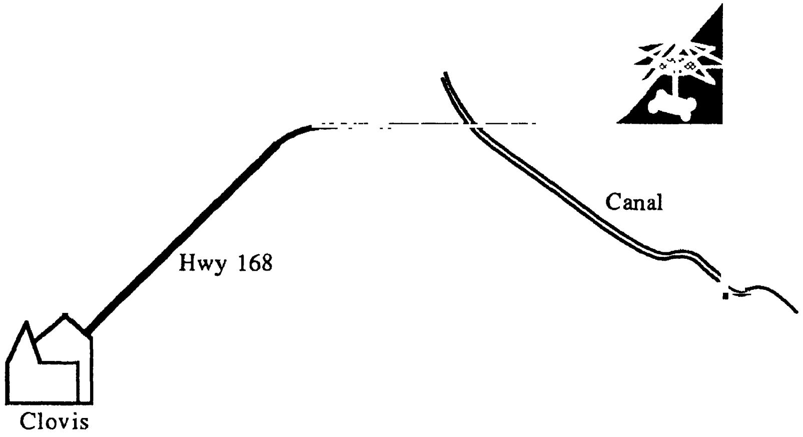

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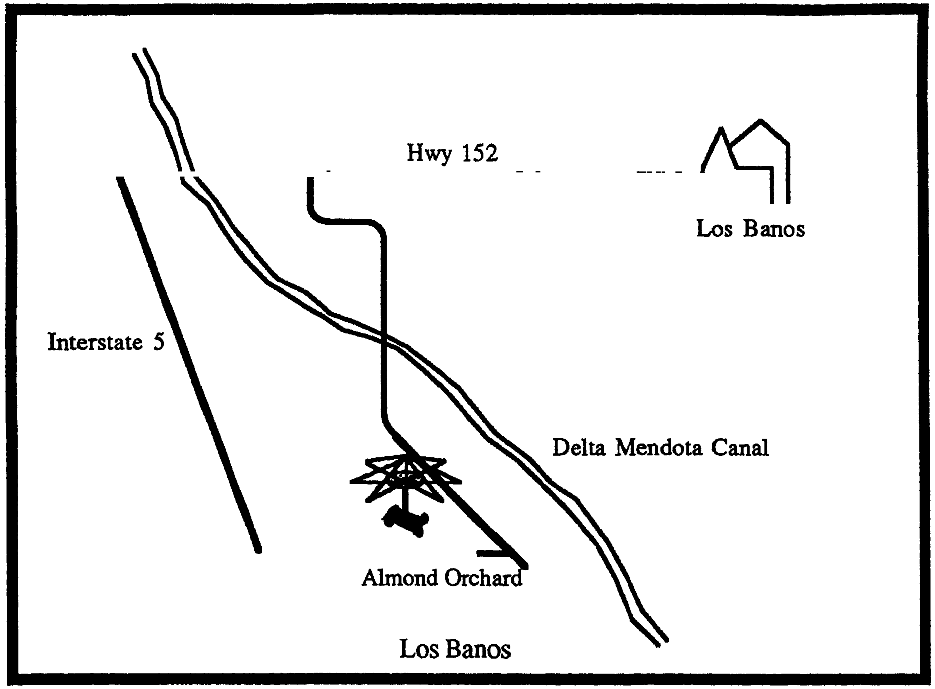
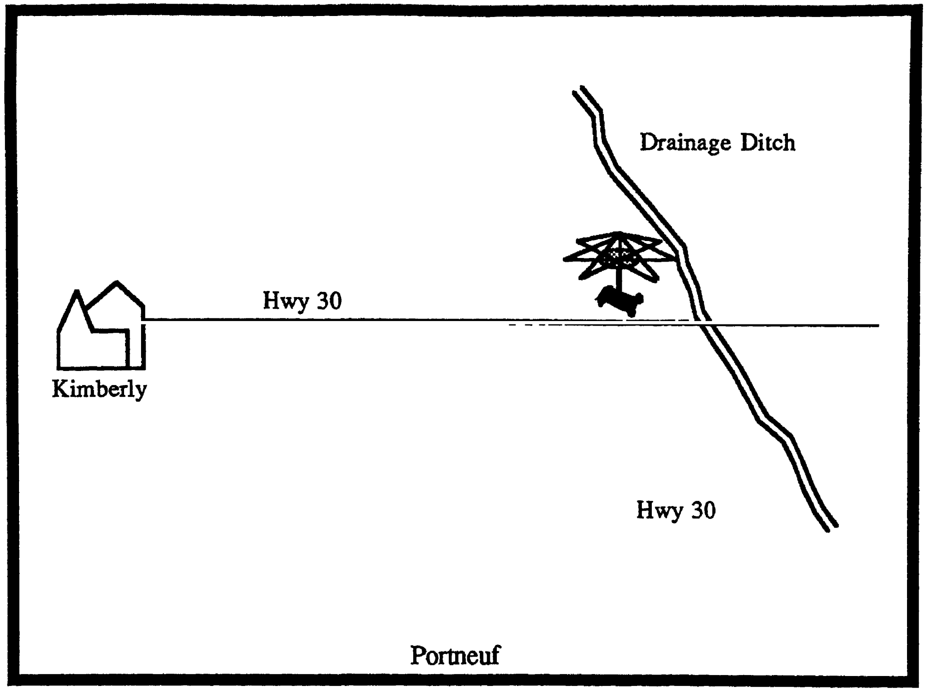


Los Banos



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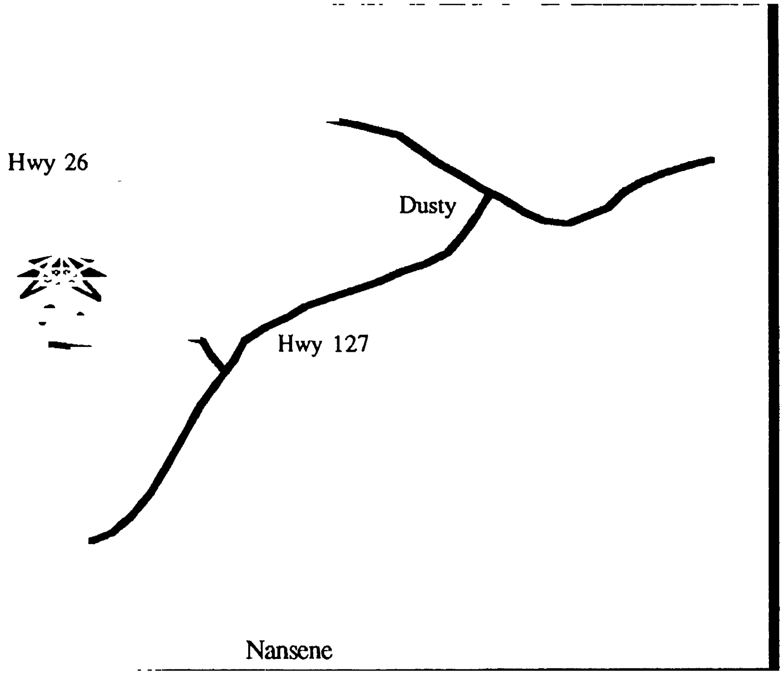

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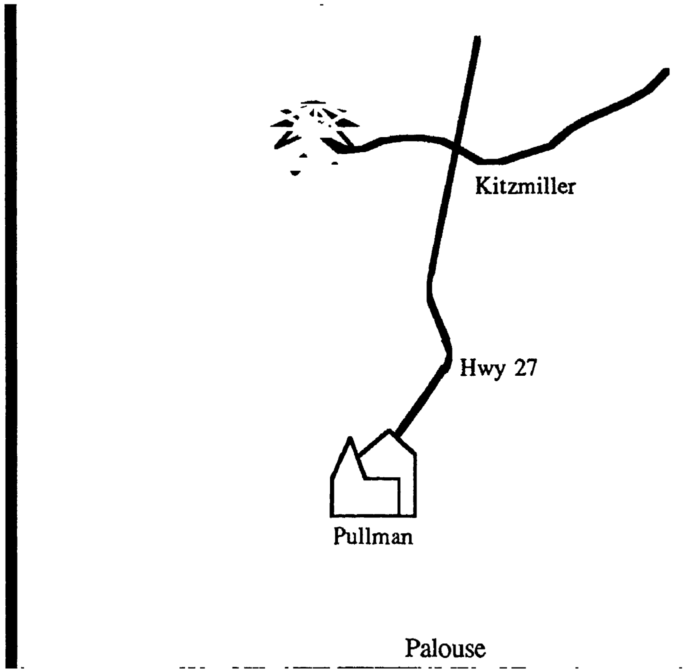

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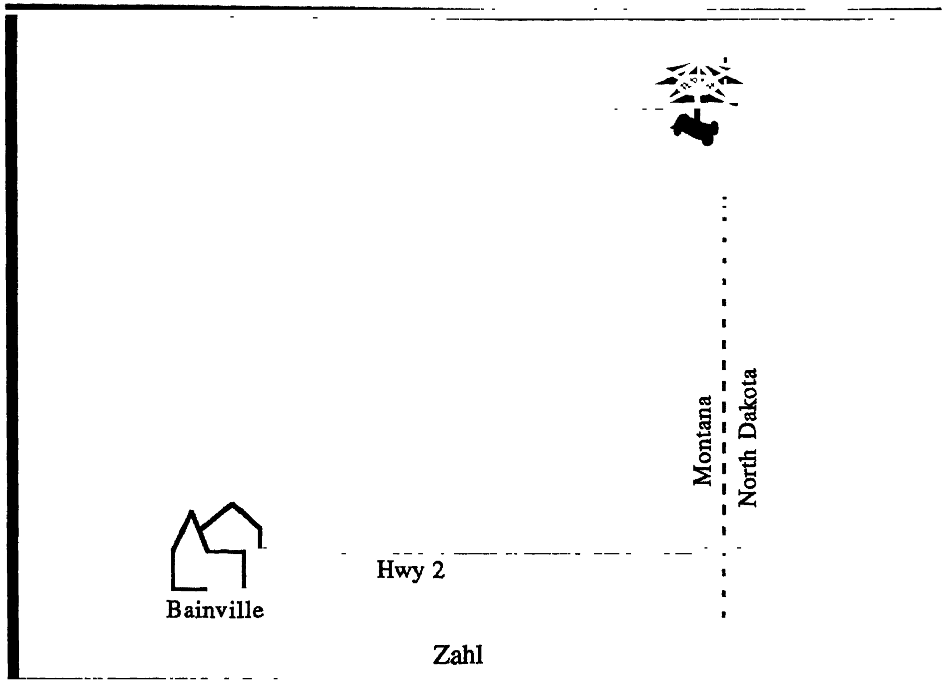

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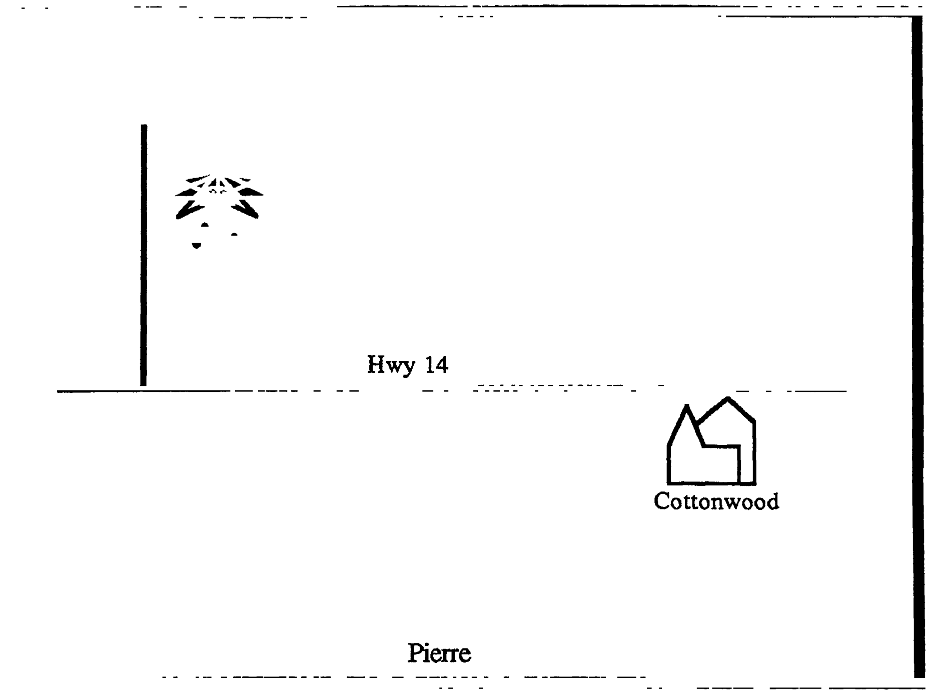

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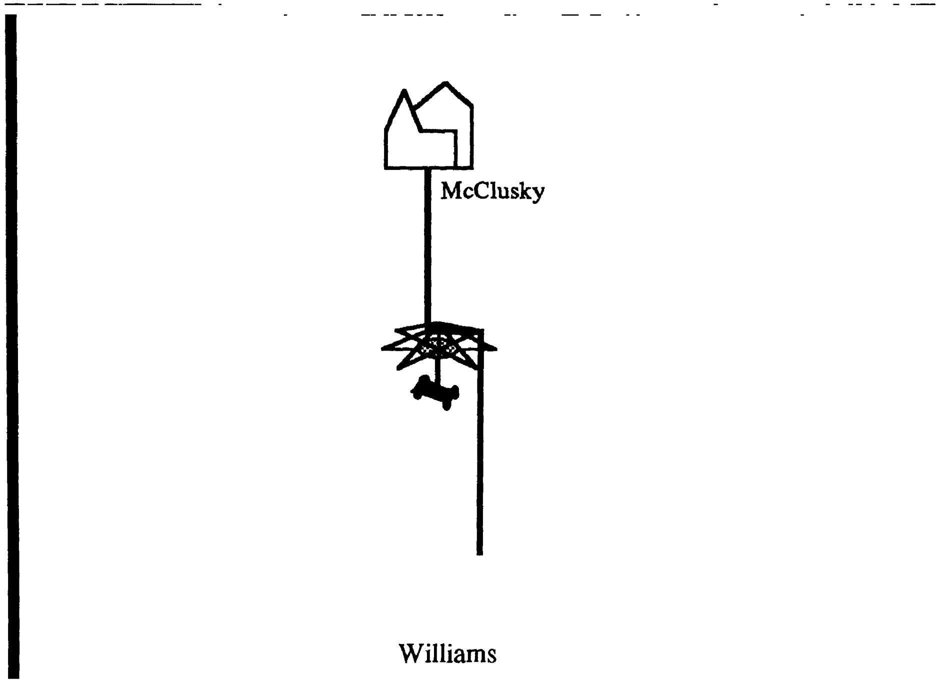

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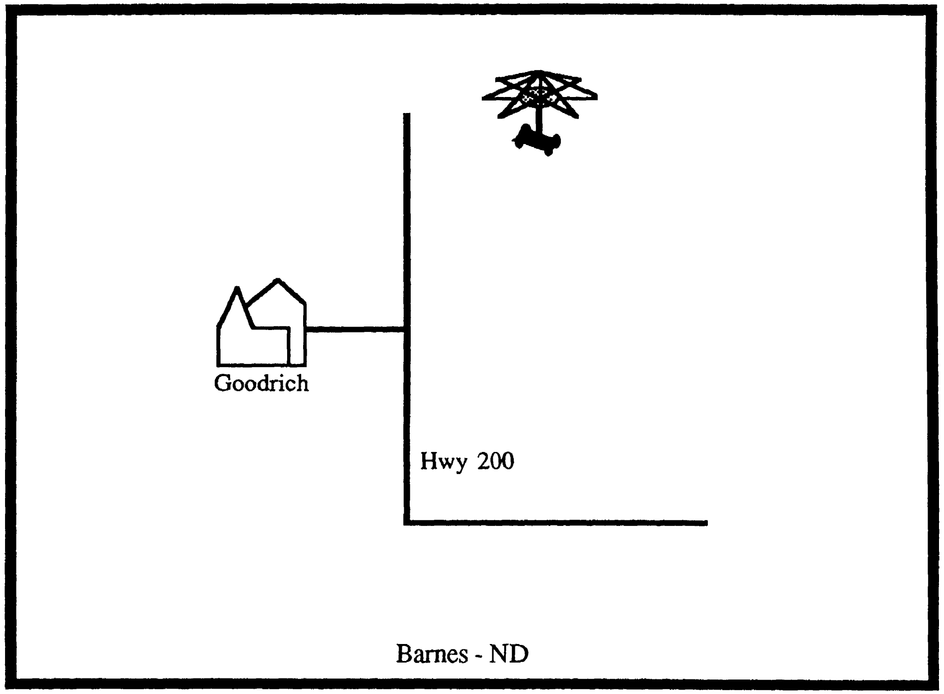

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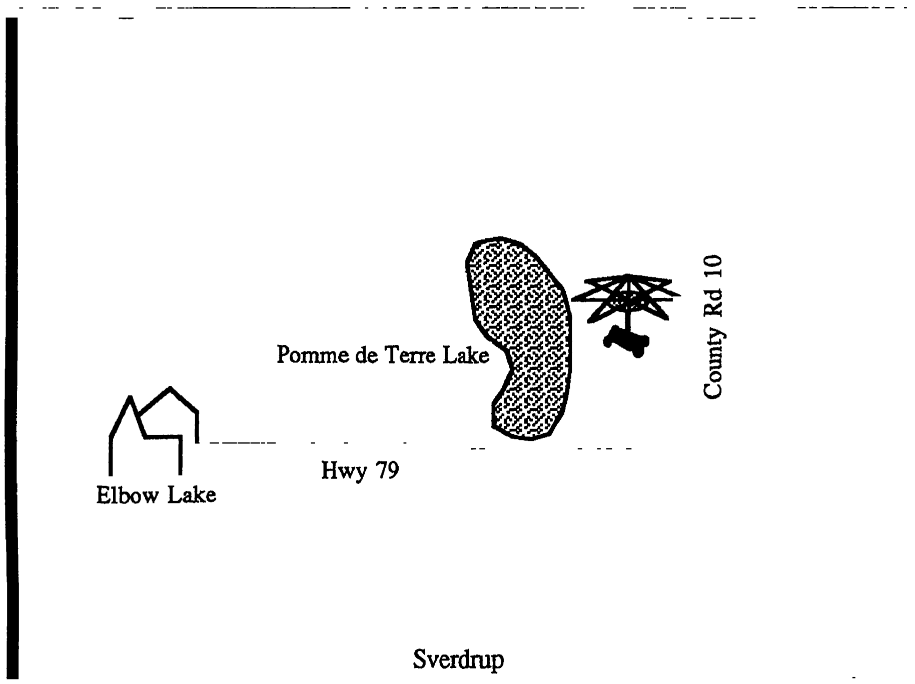

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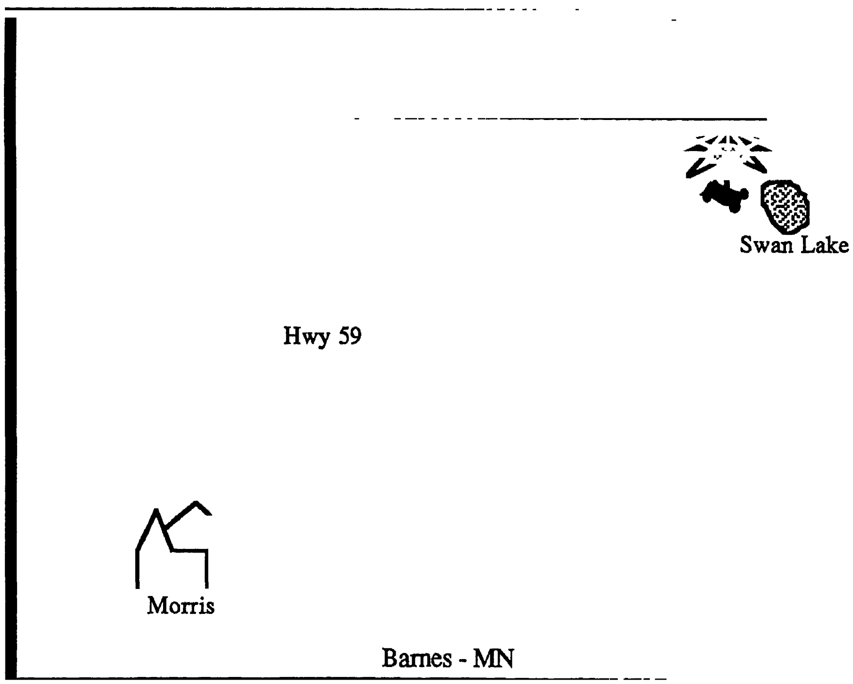
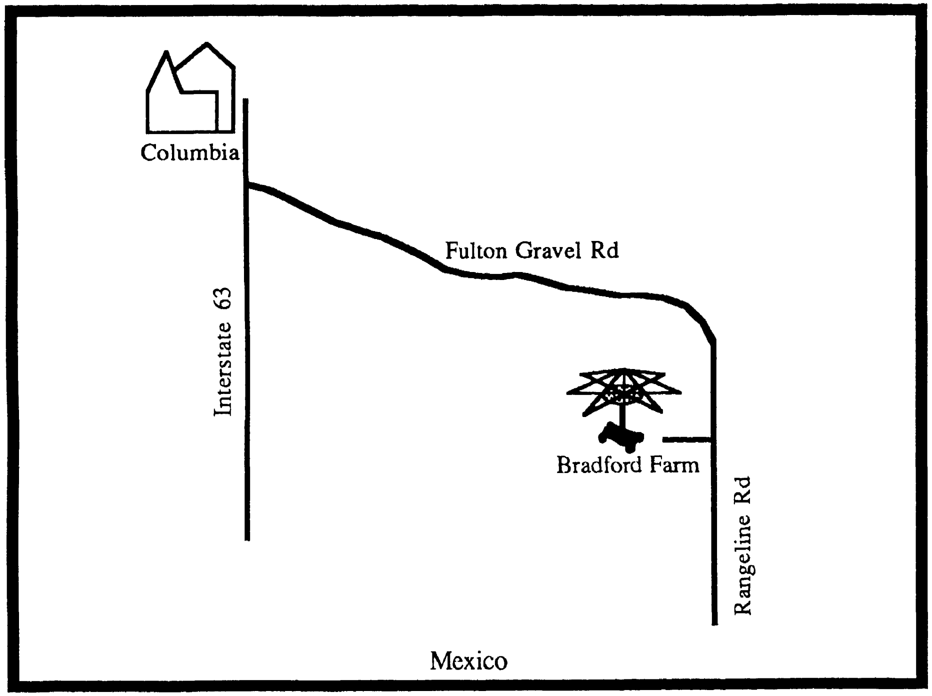


Barnes - MN



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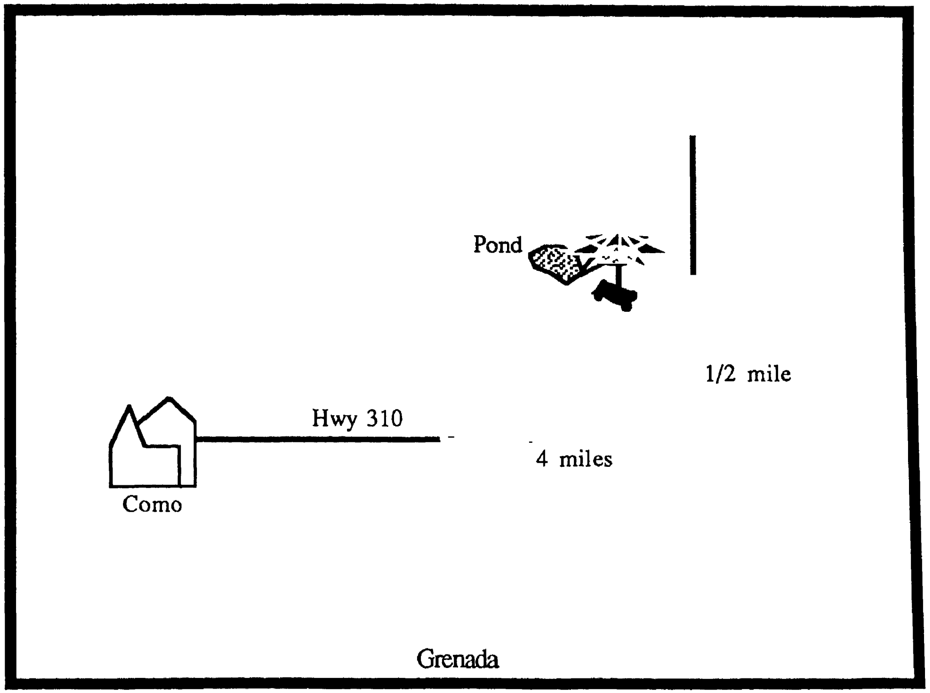

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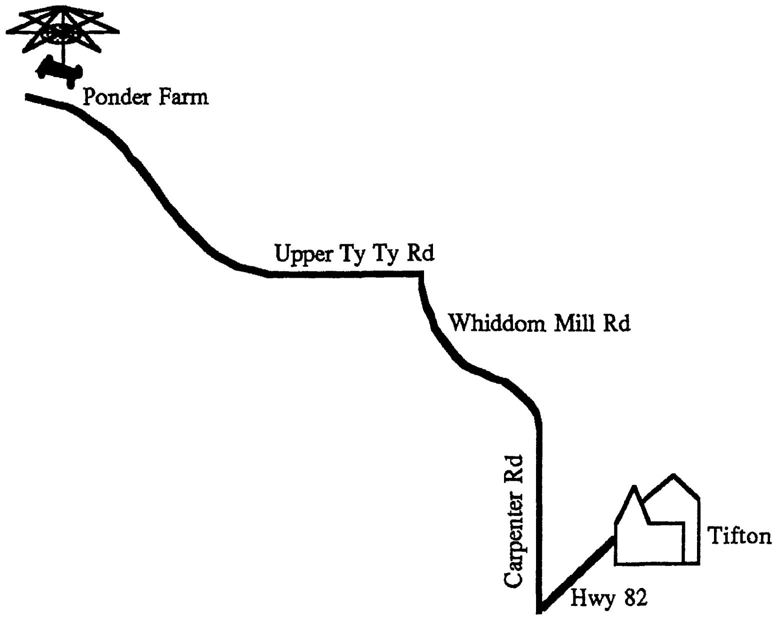

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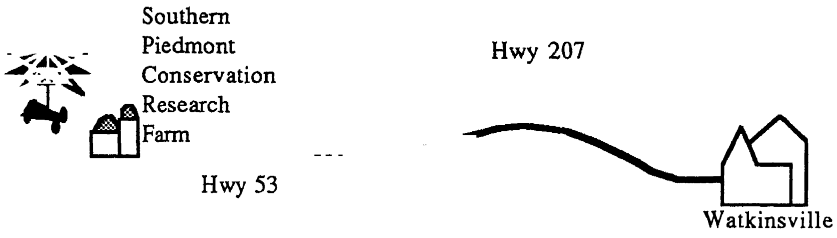

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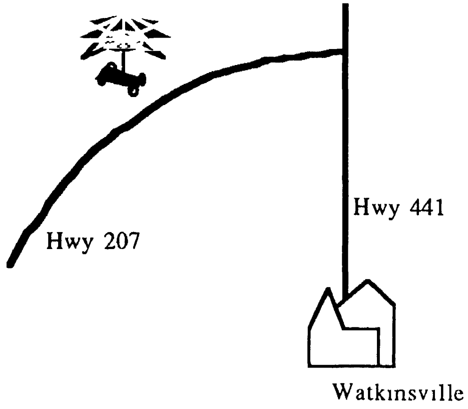

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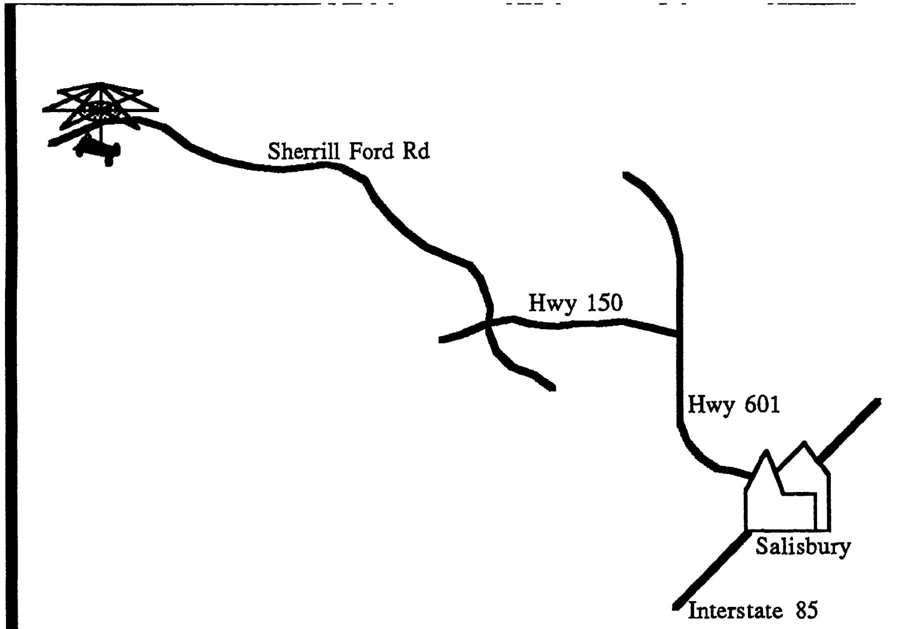

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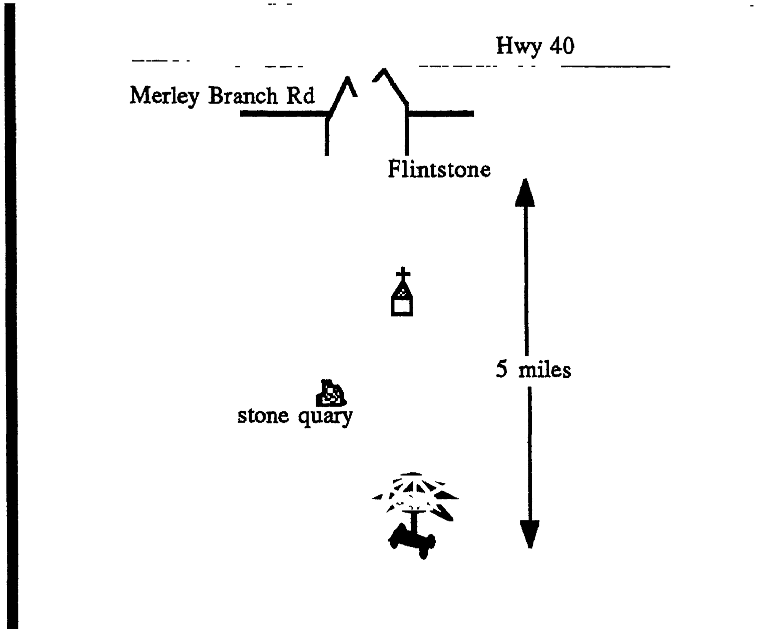

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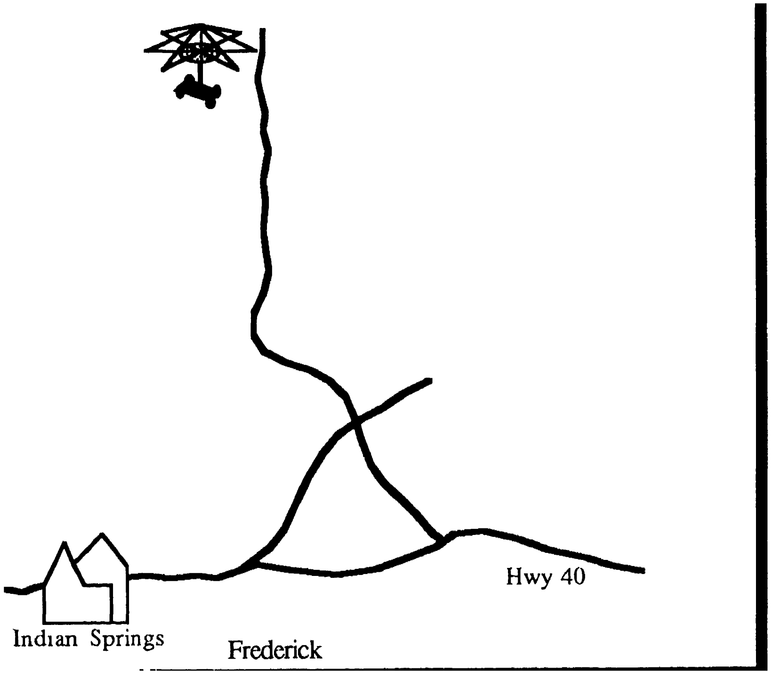

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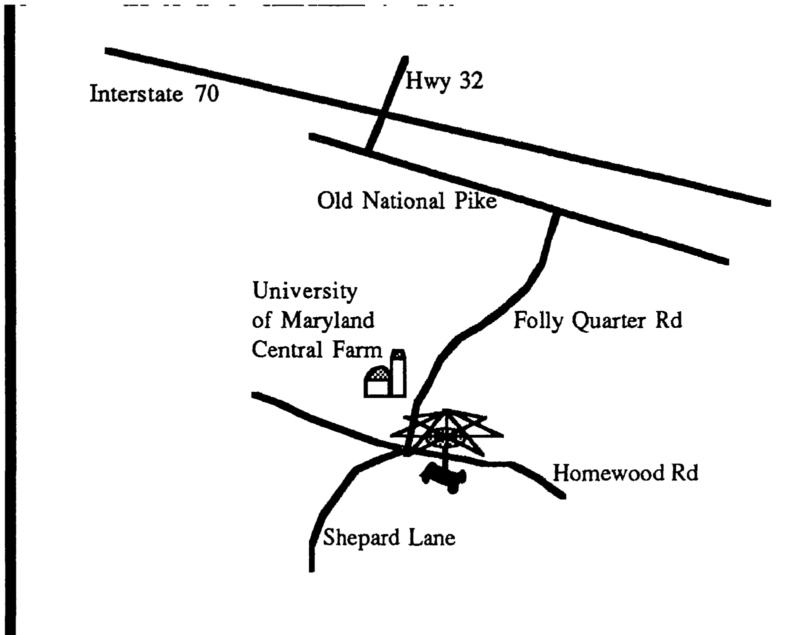

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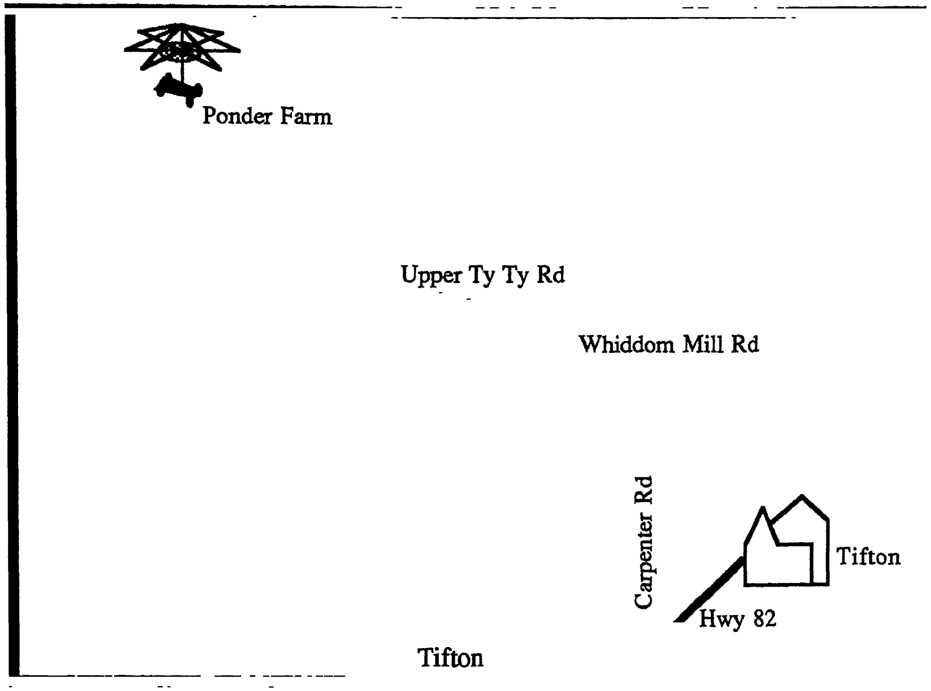

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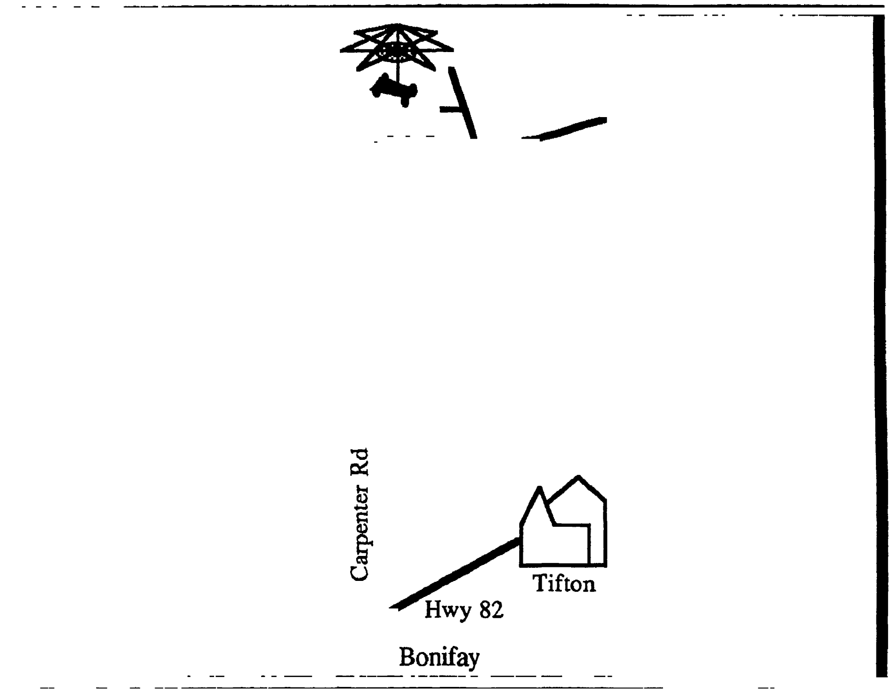

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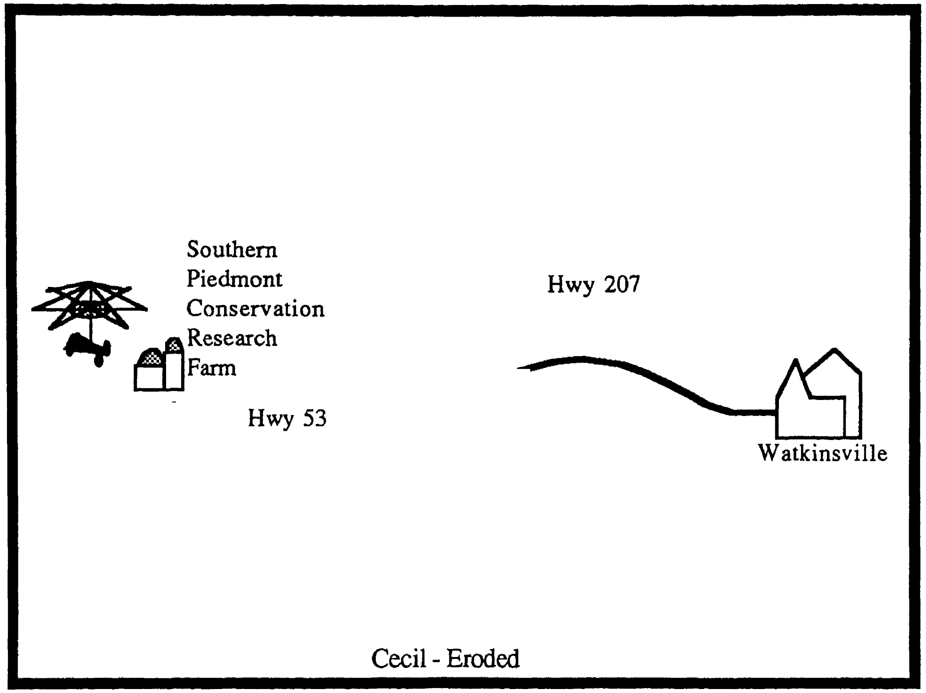

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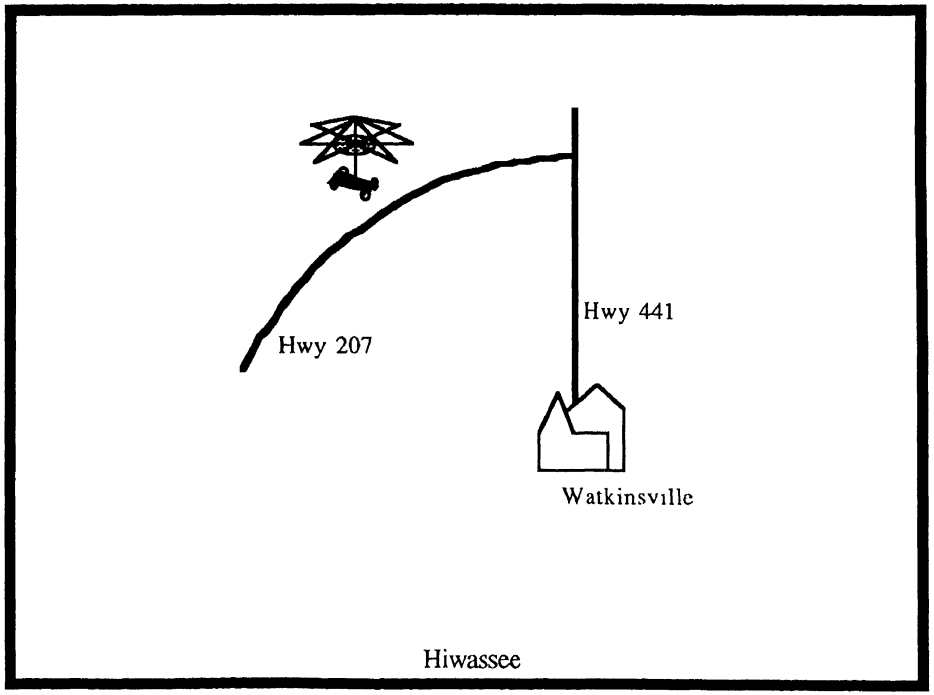

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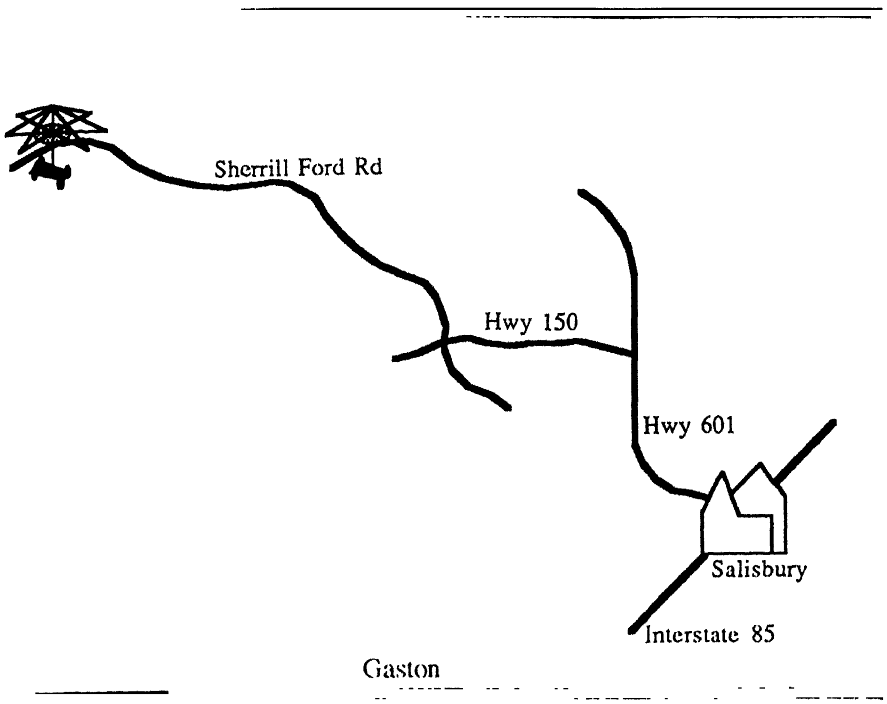
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Salisbury
Interstate 85
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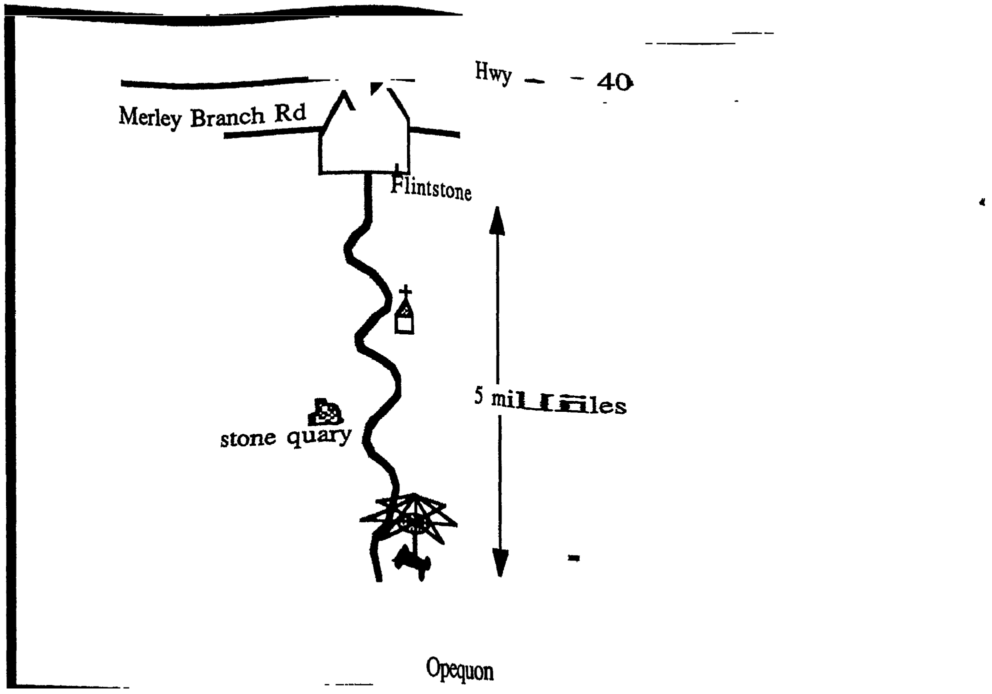
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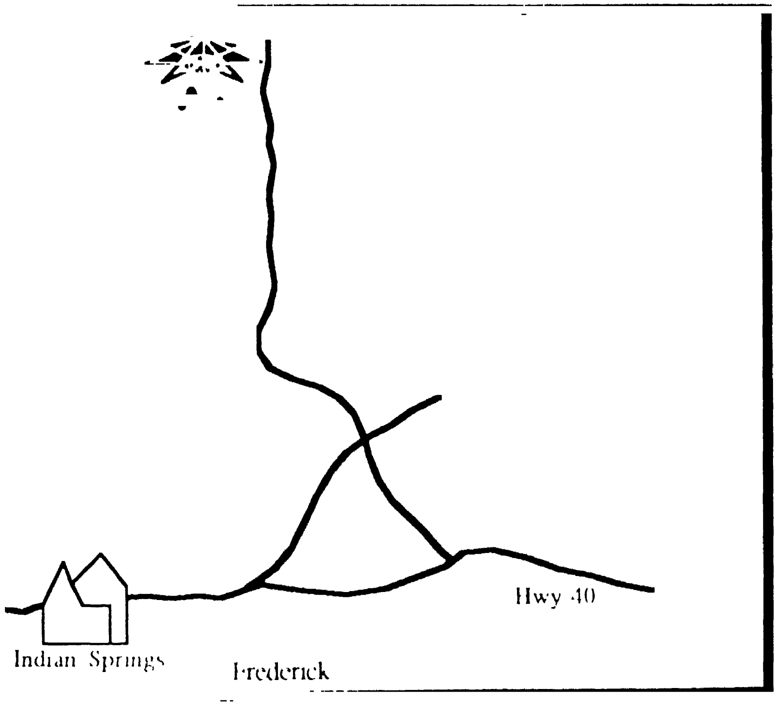
Flintstone
stone quary
5 miles
Opequon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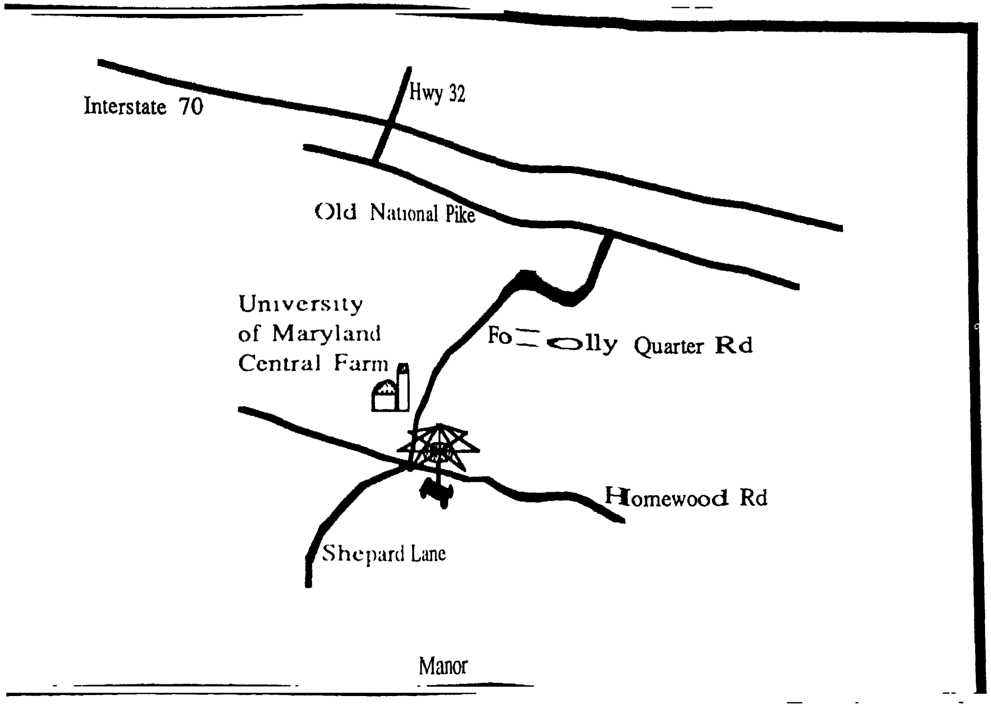
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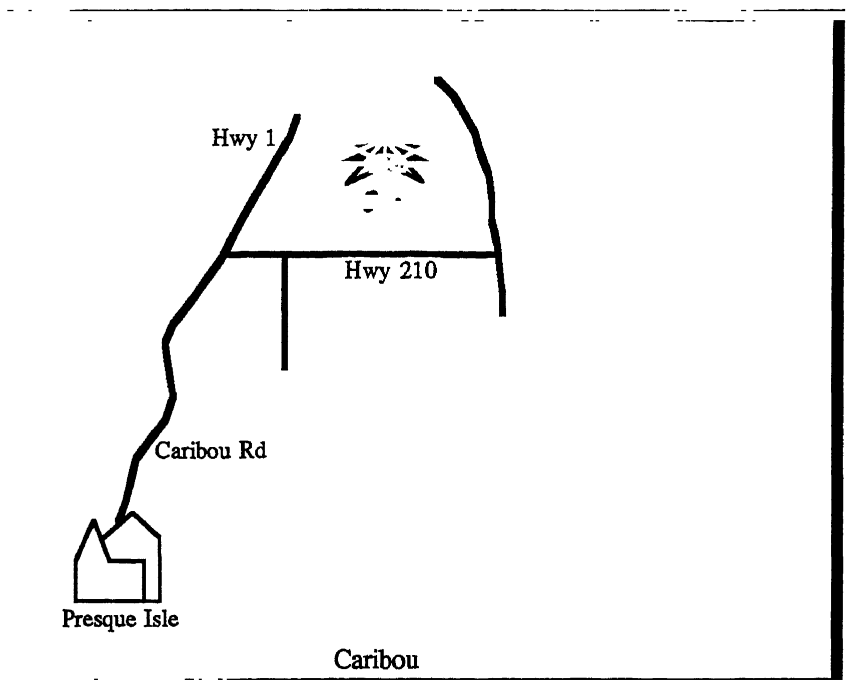
University of Maryland Central Farm
Folly Quarter Rd
Homewood Rd
Shepard Lane
Manor



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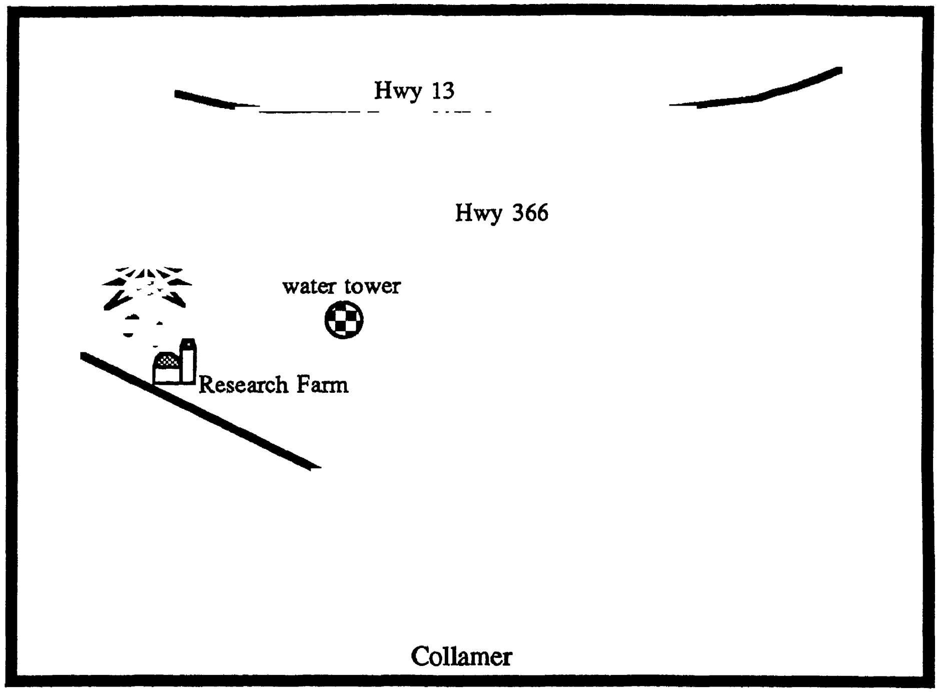

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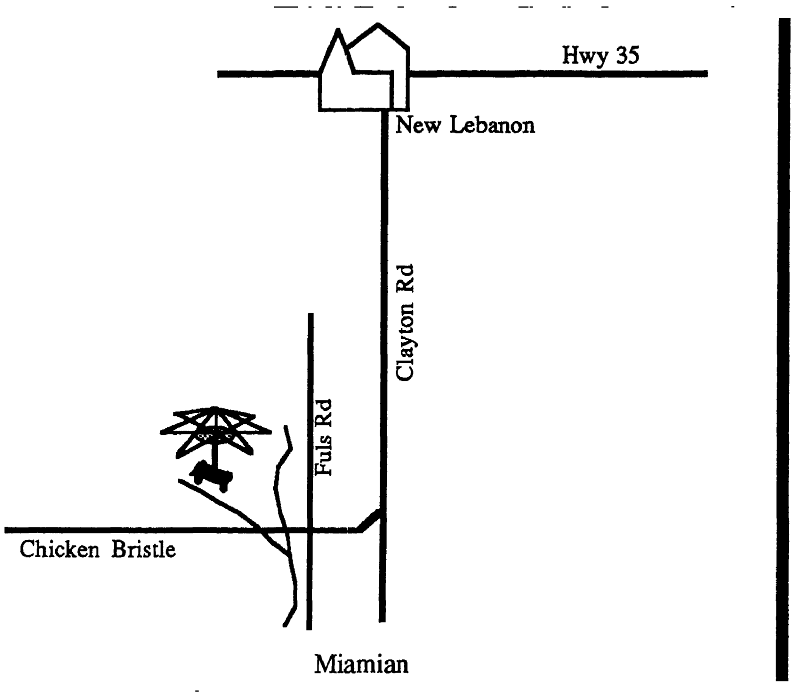

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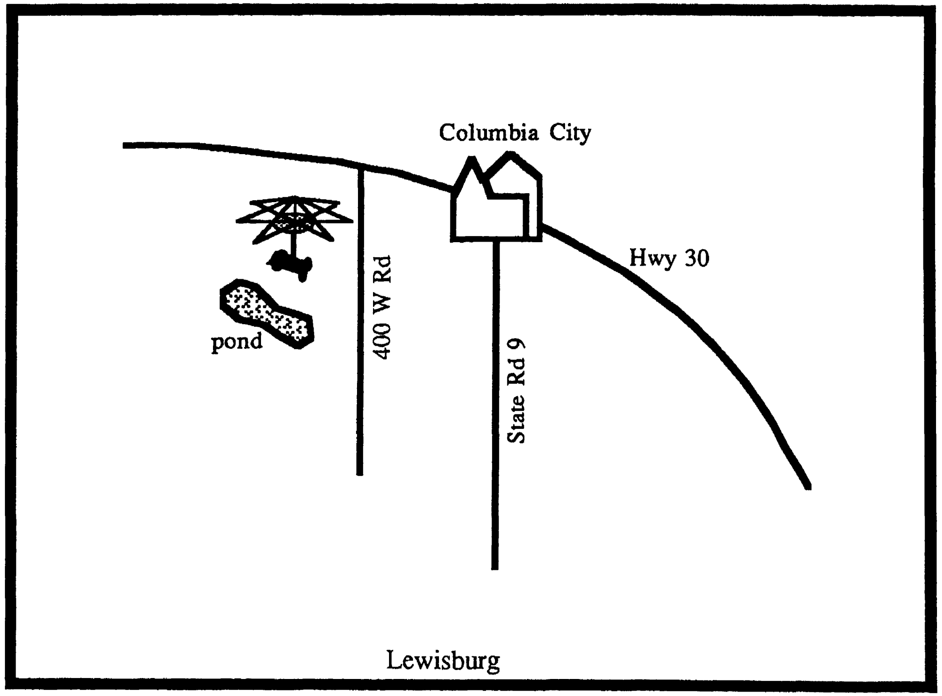

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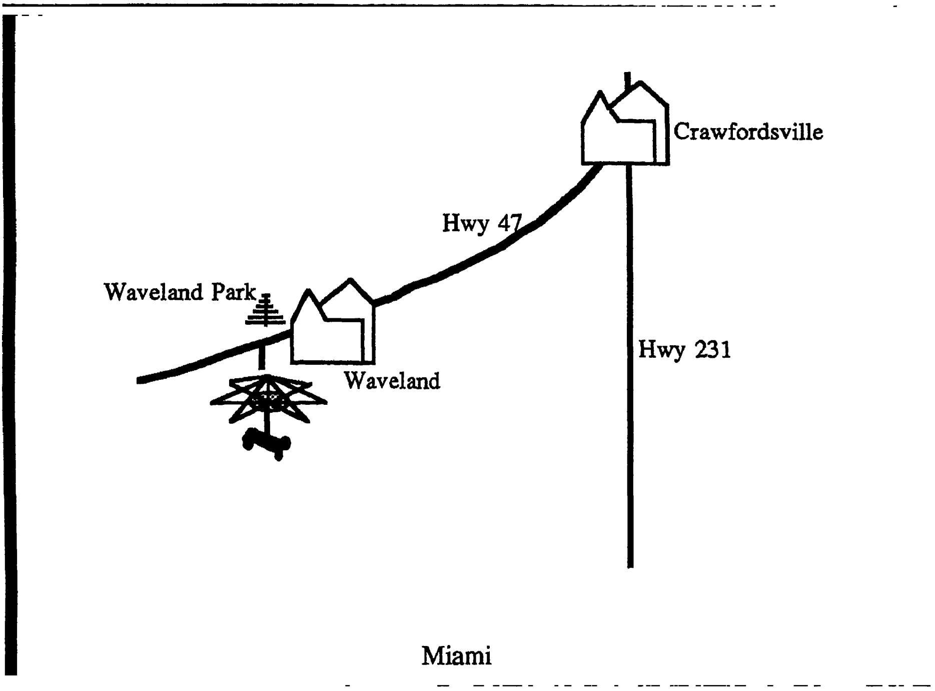
Crawfordsville
Hwy 47
Waveland Park
Waveland
Hwy 231
Miami

Acknowledgements

Data Collection and Analysis

John Laflen
Research Leader ARS
National Soil Erosion Research Lab
West Lafayette, IN
William Elliot
USDA National Needs Fellow
Iowa State University, Ames, IA
Kris Kohl
USDA National Needs Fellow, ISU
Richard Hartwig
Research Technician ARS, ISU
Diane Cronk
Secretary ARS, ISU
Anissa Ameen
Clerk-Typist, ISU
Alica Read Ketchem
Agricultural Engineer SCS, NSERL
Larry West
Soil Scientist ARS, NSERL
Jeff Porter
Agricultural Engineer ARS, NSERL
Jimmie Ellis
Research Technician
ARS Watkinsville, GA
Bob Benson
Physical Science Technician ARS, NSERL
Richard Sporrer
Agricultural Engineering Student, ISU
Ann Liebenow
Agricultural Engineering Student, ISU
Brad Ripkey
Civil Engineering Student, ISU
Mark McCurdy
Agricultural Engineering Student, ISU
Mike Delaney
Agricultural Engineering Student, ISU
Debra Anderson
Business Student, ISU
Gunilla Eagalton
Animal Science Student
University of Arizona, Tucson, AZ
Donna Page
Watershed Management Graduate Student, UA
Warren Brown
General Studies Student
Ricks College, Rexburg, ID
Brian Meyers
Agricultural Engineering Student, ISU
Shawn Werbach
Agriculture Student, ISU
Robert Buxton
General Studies Student, ISU
Mark Kaminski
Marketing Student, ISU
William Rice
Photogrammetric Assistant
Center for Remote Sensing and Mapping
Science, University of Georgia, Athens, GA
Devlin Fung
Photogrammetrist, CRSMS, UGA
Carol Lehtola
Agricultural Eng. Graduate Student, ISU
Bob Bye
Computer Science Graduate Student, ISU
David Wohlsdorf
Agricultural Engineering Student, ISU
Richard J. Smith
Professor of Agricultural Engineering, ISU
Steven Holzhey
Head of National Soil Survey Laboratory
SCS Lincoln, NE
Robert Grossman
Research Soil Scientist SCS, NSSL
Ronald Yeck
Research Soil Scientist SCS, NSSL
Shirley Laflen
Lafayette, IN
Annette Elliot
Worthington, OH
Kelly Kohl
Storm Lake, IA

Sharpsburg, Hersh, Keith

John Gilley
Agricultural Engineer ARS
Steven Finkner
Research Engineer
University of Nebraska, Lincoln, NE
Paul Reznicek
Research Technologist, UN
Lynn Kerchal
Landowner, Ord, NE
William Woodhouse
Landowner, Albin, WY
Carol Bartels
Area Soil Scientist SCS
Richard Zinc
Area Soil Scientist SCS
Wayne Zanek
Area Soil Scientist SCS

Amarillo

Donald Fryrear
Research Leader ARS
Big Spring Field Station
Big Spring, TX
Charlie Thompson
State Soil Scientist SCS
Tom Feuerbacher
Area Soil Scientist SCS
Ted Zobeck
Soil Scientist ARS
Dan Blackstock
SCS

Woodward

William Berg
Soil Scientist ARS
Dean Carter
Landowner, Buffalo, OK
John Loch
Agricultural Research Technician ARS

David Hungerford
District Conservationist SCS
Charles Cail
Soil Scientist SCS
Jimmy Ford
Soil Scientist SCS
Gerald Sample
Soil Scientist SCS
Jimmie Frie
Soil Correlator SCS

Heiden

Clarence W. Richardson
Laboratory Director, Southern Plains Area
Grassland, Soil and Water Research Laboratory
ARS, Temple, TX
Lester C. Brockman
SCS, Temple, TX
Gaylon L. Lane
SCS, Temple, TX
Lester Byer
ARS, Riesel, TX
James Haug
ARS, Riesel, TX
Gary Hoeft
ARS, Riesel, TX
Louis Picha
ARS, Riesel, TX

Whitney, Academy, Los Banos

Richard Mead
Soils Technician ARS
Kim Chang
Soil Scientist SCS
Glenn Hoffman
Director of Water Management Lab
ARS Fresno, CA
Paul Romero
Landowner
Price Giffen
Landowner
Robert Ferrara
Landowner

Portneuf

Mel Brown
Soil Scientist ARS
David Carter
Supervisory Soil Scientist ARS
Gerald Richard
State Soil Scientist SCS
Harold Maxwell
Assistant State Soil Scientist SCS
Floyd Bailey
State Agronomist SCS

Nansene, Palouse

Don McCool
Agricultural Engineer ARS
Paul Mutch
Hydraulic Technician ARS
James Carley
State Soil Scientist SCS
Robert Engel
State Soil Scientist SCS
Dale Stockman
Soil Scientist SCS
James Andrews
Agricultural Research Technician
Washington State University
Hans Kok
Research Associate, WSU
Bud Aune
Farmer Cooperator
Kirk Wigen
Farmer Cooperator
Steve Mader
Farmer Cooperator

Zahl

J. Kristian Aase
Research Leader ARS
Northwest Area Northern Plains Soil
and Water Research Laboratory
Larry Reitz
Agricultural Research Technician ARS
Dave Harris
Biological Aid ARS

Dick Iverson
District Conservationist SCS
Dennis Smetana
Soil Scientist Specialist SCS
Robert Mattingly
Landowner, Bainville, MT

Pierre

Leon Stirling
District Conservationist SCS
Robert Nielsen
Soil Scientist SCS
Arnold Mendenhall
State Range Conservationist SCS
Richard Kjerstad
Landowner, Cottonwood, SD

Williams, Barnes-ND

Armand Bauer
Soil Scientist ARS
Roland Vredenburg
Agricultural Research Technician ARS
Mervin Stork
Agricultural Research Technician ARS
Ruben Winter
Farmer Cooperator, Goodrich, ND
Elmer Laib
Farmer Cooperator, McClusky, ND
C. J. Heidt
Soil Correlator SCS
J. H. Thiele
Assistant State Soil Scientist SCS
L. I. Lennick
Manuscript Technician SCS
S. King
Secretary SCS
F. P. Aziz
Soil Survey Party Leader SCS
S. G. Carpenter
Soil Scientist SCS
Clinton Neff
Technician SCS

Sverdrup, Barnes-MN

Robert Young
  Agricultural Engineer ARS
Gary Amundson
  Engineering Technician ARS
Tony Gausman
  Engineering Technician ARS
Don Demartelaere
  Area Soil Scientist SCS
Dennis Heil
  State Soil Scientist SCS

Mexico

Eugene Alberts
  Soil Scientist ARS
Dale Clark
  ARS
Joel Haden
  ARS
Kathleen Hedler
  ARS
Robert Mahurin
  ARS

Grenada

Don Meyer
  Agricultural Engineer ARS
W. S. Taylor
  Landowner, Como, MS
J. S. Huddleston
  Soil Scientist SCS
W. C. Harmon
  Hydraulic Engineer ARS
D. E. Line
  Hydraulic Engineer ARS
M. G. Channell
  Technician ARS
R. B. Hinton
  State Soil Correlator SCS
J. P. Cook
  District Conservationist SCS

Tifton, Bonifay

Randy Williams
  Agricultural Engineer ARS
Tommy Gibbs
  Maintenance Technician, UGA
Herman Henry
  Technician ARS
H. L. Batten
  Technician ARS
University of Georgia Coastal Plain Experiment Station

Cecil (Eroded), Hiwassee

James Box
  Soil Scientist ARS
Johnny Doster
  Technician ARS
Robert Sheets
  Technician ARS
Ingrid Verstraaten
  Graduate Student
  University of Nebraska, Lincoln, NE

Tifton, Bonifay, Cecil (Eroded), Hiwassee

Talbert Gerald
  State Soil Scientist SCS
Reese Berdanier, Jr.
  Soil Scientist SCS, Fort Worth, TX
Robert Wilkes
  Assistant State Soil Scientist SCS
Warren Lynn
  Research Soil Scientist, NSSL Lincoln, NE

Gaston

Clifford McCachren
  Soil Survey Party Leader SCS
Lipe Barrier, Jr.
  District Conservationist SCS
Roy Goodwin, Jr.
  Soil Specialist SCS
Hubert Pate, Jr.
  Civil Engineering Technician SCS
Ajmal Heshaam
  Soil Specialist
  North Carolina Department of Natural Resources and Community Development
Billy Ayscue
  Research Station Superintendent
  NC Department of Agriculture
  Piedmont Research Station
Ray Horton
  Research Station Crops Units Manager
Horace Smith
  State Soil Scientist SCS
Tom Wetmore
  Area Conservationist SCS

Opequon, Frederick, Manor

Walter Rawls
  Research Hydrologist ARS
Reza Savabi
  Assistant Research Scientist
  University of Maryland
Carl Robinnette
  District Soil Scientist SCS
Carol Wettstein
  State Soil Scientist SCS
Edgar White
  Assistant State Soil Scientist SCS
Paul Robinnette
  Landowner, Flintstone, MD
James Rowland
  Landowner, Hancock, MD
Frank Walbert
  Landowner, Ellicot City, MD
Owen Lee
  Program Analyst ARS

Caribou

Mike White
  District Conservationist SCS
Harrison Farms Inc
  Landowner, Presque Isle, ME
Ray Harrison
  Farm manager

Central Aroostook Soil and Water
Conservation District

Collamer
Richard Zobel
Research Geneticist ARS
Richard F. Lychalk
Research Technician ARS
Donald Ellis
Experimentalist, Agronomy
Cornell University, Ithaca, NY
Robert Johnson
Research Support Specialist, Agronomy, CU
Karl Pendleton
Field Assistant (Acting Field Manager)
Agronomy, CU
William Waltman
Research Associate-Soils Classification
Agronomy, CU
Thomas Scott
Professor of Agronomy, CU

Miamian
Norman Fausey
Soil Scientist ARS
Janet Leis
Landowner, New Lebanon, OH
Randy Leis
Farm operator
Stephen Boeder
District Conservationist SCS
Richard Gehring
Area Soil Scientist SCS

Lewisburg, Miami
Jeff Porter
Agricultural Engineer ARS, NSERL
Larry Staley
Soil Scientist SCS
Terrence Sobecki
Soil Scientist SCS, NSSL
Bill Hosteter
Soil Specialist SCS
Ray Sinclair
State Soil Scientist SCS
Joe Updike
District Conservationist SCS
Betsy Meggison
SCS
Kent Kneller
Soil Conservation Technician SCS
Dan Rouesch
Area Soil Scientist SCS
Richard Kyler
Erosion Control Technician IDNR
Tim Kyler
Landowner, Columbia City, IN
Richland Township Fire Department
Whitley County Soil and Water
Conservation District
Nadean Eldine
Secretary, Whitley Co. SWCD
Don Woll
Assistant Supervisor, Whitley Co. SWCD
Steven Woll
District Conservationist SCS
Jerold Shively
Area Soil Scientist SCS
Robert McClure
Landowner, Waveland, IN
Montgomery County Soil and Water
Conservation District
Waveland Fire Department
George Reger
IDNR
Dr. Donald Franzmeier
Professor of Agronomy, Purdue University
West Lafayette, IN

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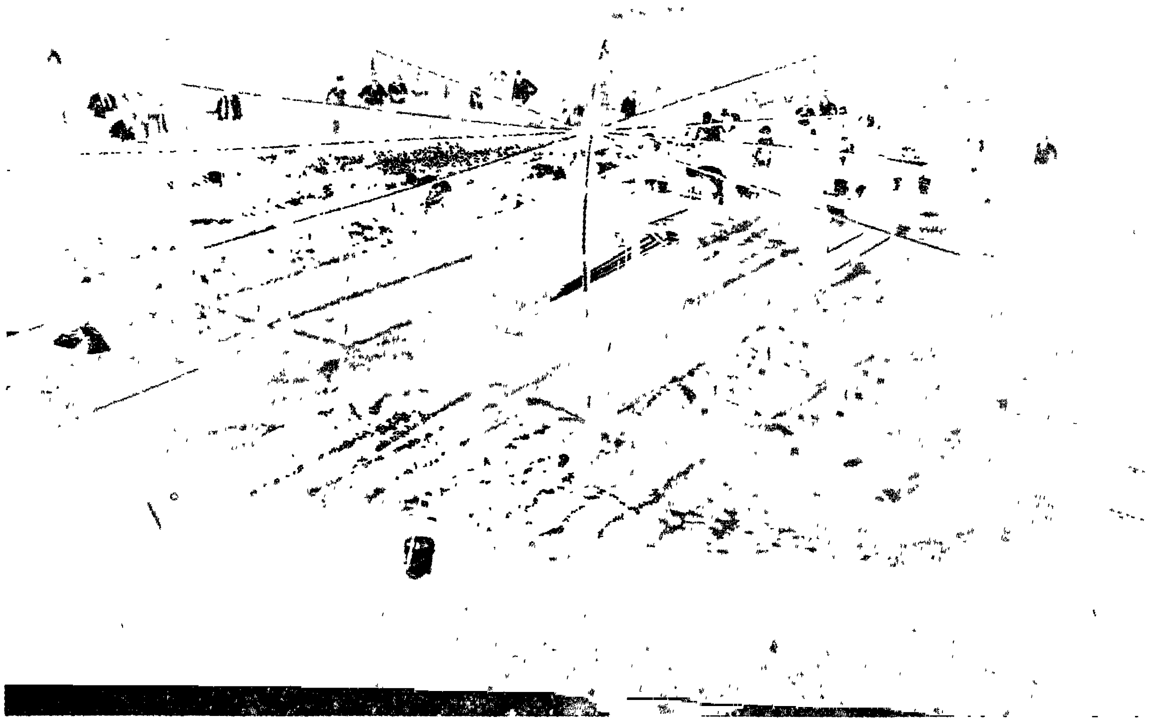
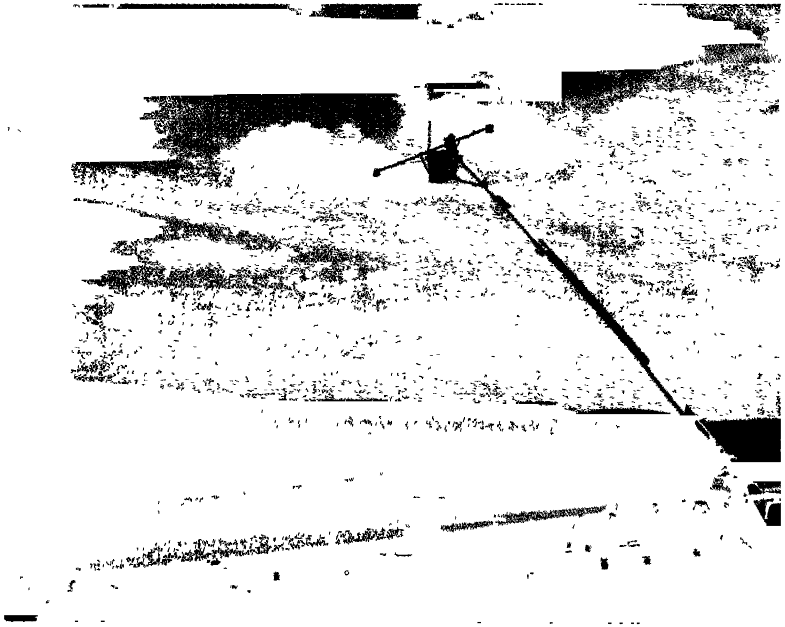
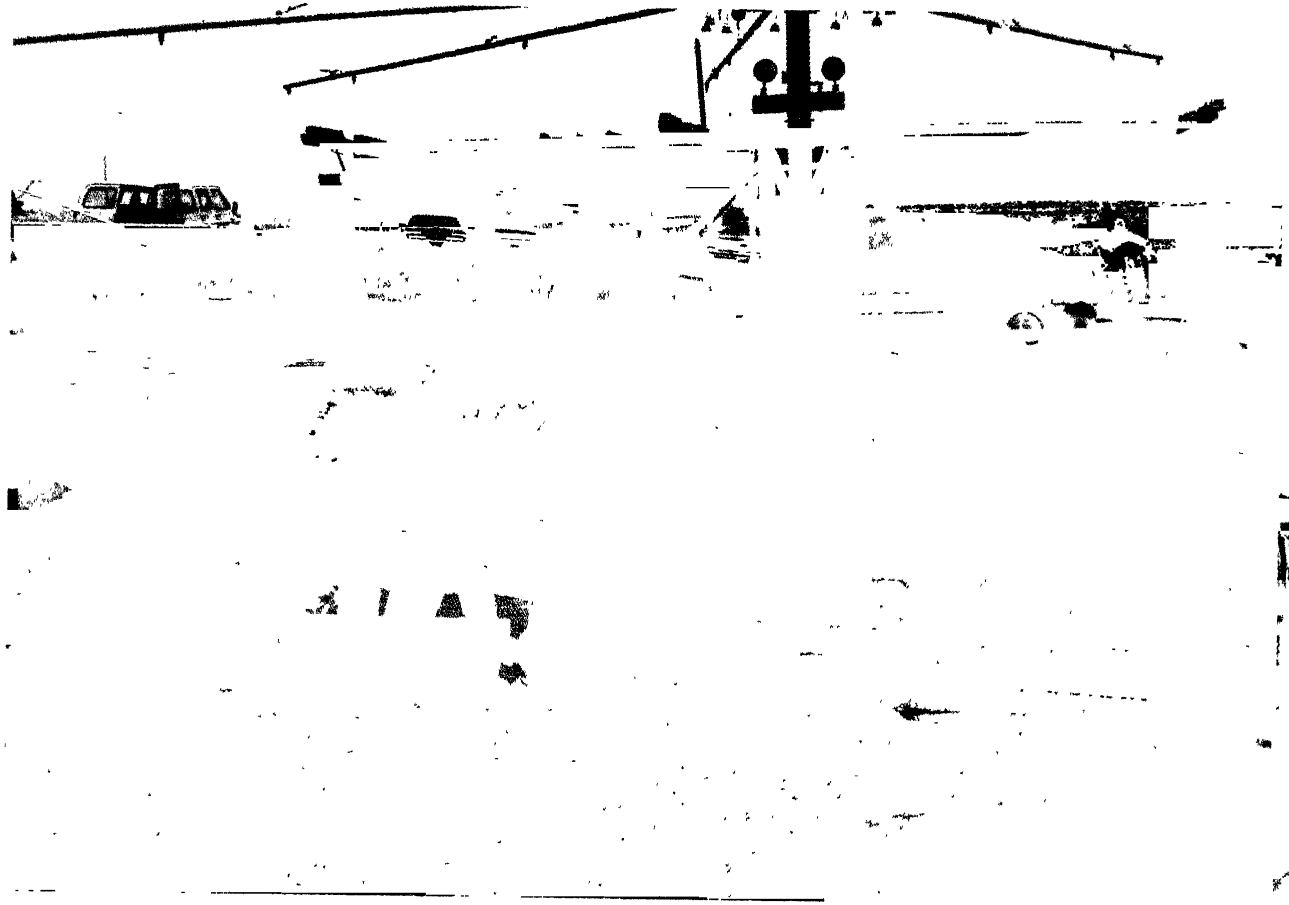




A Compendium of Soil Erodibility Data from WEPP Cropland Soil Field Erodibility Experiments 1987 & 88



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